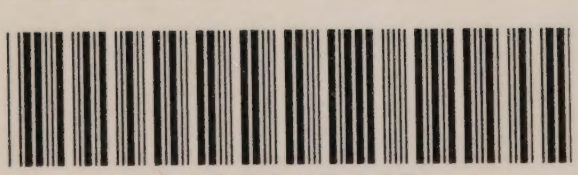
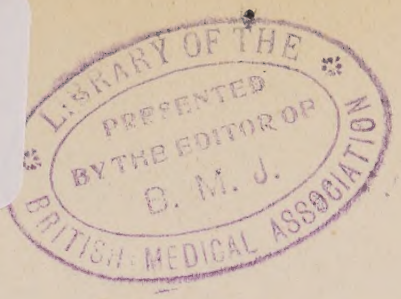
MYSTERIES OF LIFE

BY

S. DE BRATH

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MYSTERIES OF LIFE

AUTHOR OF

"FOUNDATIONS OF SUCCESS,"

"WHY DO WE COME TO SCHOOL?"

Etc., Etc.

AND JOINT AUTHOR OF

"OVER-PRESSURE IN EDUCATION."

MYSTERIES OF LIFE

A BOOK FOR BOYS AND GIRLS

BY

STANLEY DE BRATH

M.INST.C.E.

Late Headmaster Preston House Preparatory School, East Grinstead,
Member of the Association of Public School Science Masters,
Member of the Mathematical Association, &c., &c.

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TO THE DEAR MEMORY

OF

FREDERICA BEATTY

The colleague whose unfailing constancy of purpose, insight into character, and unwearied co-operation in the heavy work of Education for many years made that work a pleasure, and whose constant aim was to influence children through their admiration for the beautiful and the heroic in the Story of the World

THIS BOOK IS DEDICATED

First published in 1915

PREFACE

Addressed to Parents and Teachers.

Since the fall of Napoleon at Waterloo, each generation that has experienced the awful waste of human life and human happiness, the misery and destitution, caused by war, has declared vehemently that wars shall cease.

Just before the first International Exhibition was held in 1852 we were told that the world had become too enlightened for war and that henceforward commercial interests and civilized methods would supersede its brutalities.

Within a few short years England and France were at war with Russia ; France and Italy were at war with Austria ; and the decision had even then been taken by William I. of Prussia to use the Army, and not the Frankfort Parliament, as the means for the reconstruction of the German Empire—a resolution which resulted in the war of 1863 which annexed Schleswig, the war of 1866 which displaced Austria, the war of 1870

which crushed France, and whose final outcome we are even now experiencing.

After 1870, humanitarians and pacifists repeated once more the moral platitudes of 1850, and the "Great Illusion" was demonstrated as illusory to their complete satisfaction. They settled into their lives of comfort and luxury, and shut their eyes alike to true causes, to History, and to the signs of the times.

But they took no measures to prevent the horror. They behaved as if their own experiences would suffice for the next generation. The natural results followed: that generation, without the experience to correct the result of a system of instruction which seems specially devised to ignore all realities, whether physical or spiritual, worked through the same cycle of causes to similar effects.

This war is a conflict between two principles. Historically it comes of the policy which deliberately chose militarism and autocracy under a thin constitutional disguise as the means of German expansion. Morally it is the final outcome of applying to human life the principle of the Struggle for Existence and the Survival of the Strongest which is the natural means of Evolution in the brute world. The deliberate preparation, the elaborate antecedent falsehoods, the ascription to others of intended treacheries, the shameless

violations of pledged faith, the hideous cruelties on helpless prisoners and women, the diabolical methods, and all the violations of honour which have marked the war are but the logical outcome of the belief that there is no GOD who judges the world, no law but the will of the strongest, no life of the soul where Right must eternally prevail.

The opposing principle is that proclaimed by CHRIST, that Man is essentially a spirit living for a while in a body of flesh ; that his development and true happiness lie in industry, honesty, sobriety, and truthfulness—in a word, in right-doing ; that this is the Will of his Father in heaven ; and that by doing this Will on earth the conditions of "heaven" are created and there comes that Kingdom of God which is the Peace of the world. Therefore right-doing comes before all other "interests" whatsoever.

We exhaust ourselves in imagining means of ending war. International strikes, the suppression of armament firms, the abolition of chancelleries, treaties of arbitration, and a score of other expedients are named, just as the men of 1848 declared wars to be brought about by kings. They supposed that republicanism would suffice to end them and abolish the fruit of human greed, pride, and ambition. In a republic the human thistle would produce only figs !

But war is a spiritual effect, and if we wish to stop it we must set in motion the efficient spiritual causes.

Why halt we between two opinions? If the Lord be GOD, then follow Him; but if Baal—the god of the world, the god of force and fraud and poison—then follow him! And let the following be thorough and logical. Germany is logical; she has trained the present generation on the watchword, "*Deutschland ueber Alles*"; she has advanced to war with the cry "*Weltmacht oder Niedergang*," and her plea of "necessity" simply means that no reasons of humanity, truth, or justice can be higher than the desire to gain her own ends.

We, on the other hand, are not logical; and though many of us speak of competition as the rule of the Universe; though many doubt the existence of God because He does not "prevent" wars and disasters, which could be done only by abolishing our power of choice between good and evil and reducing us to the rank of the brutes; though many leave GOD entirely out of their lives; though many represent Him to themselves after their own image and seek to propitiate Him by a prostration of the Reason He gave—we fortunately do not frame our lives on our theories.

But He has declared Himself to Man—that His Spirit acts in the world of Mind through men of goodwill, as well as by the laws of Nature in the world of Matter and the world of Force. Neglecting the Way which he has shown us, we constantly pray Him to do for us what He has told us He will do by and through ourselves. If we would have wars to cease in all the world we must become men of goodwill. And we must so train our children that they willingly profit by our experience. This temper is brought about by Religion, and by Religion alone.

True Religion is rooted in Habit and in Science. In Habit because habits of hardihood, discipline, and self-restraint begun in childhood grow into contempt of luxury and softness and self-indulgence. In Science, because it is only the conviction of indefeasible fact and law which can overcome the illusions of the senses, and bring all men to perceive that the moral law is as inevitable as gravitation.

That religious Law shall be felt to be as real for the soul as sanitary law for the body—the Presence of GOD in the world as real as the sunlight—that is what we have to arrive at. When this has been brought about and the earth is filled with the knowledge of GOD as the waters cover the sea, then His Will shall be truly done on earth,

and therefore none shall hurt or destroy in all His holy mountain and the Kingdom of GOD shall come on the earth. To each generation the opportunity is given. To each are born the children which come to us from above.

> Their birth is but a sleep and a forgetting:
> The soul that rises in them, their life's star,
> Has had elsewhere its setting
> And cometh from afar.
> Not in entire forgetfulness,
> And not in utter nakedness,
> But trailing clouds of glory do they come
> From God who is their home.

Their opening intelligence is eager for Reality, and we feed them on its husks—husks of religion which are creeds, husks of history from which the heroic detail has been dried out, husks of science divorced from common life, and husks of language devoid of human interest. Is it not enough that we, as parents, transmit a heredity which unavoidably darkens the shades of the prison-house upon the growing child ; but that so often we should allow all its lower impulses which do not happen to interfere with our own comfort to grow up unchecked? We ignore GOD and teach "religion," if we teach it at all, as mere empty assertions ; or, ignoring all lessons of the past, we actually "leave the child to get his own religion, if he wants one, when he grows up," as more than one father has phrased

to me that last climax of the fatuity which casts away all the experience of mankind. We ignore Duty ; the " stern daughter of the Voice of GOD " is an antiquated Wordsworthian idea. I have known many children from wealthy homes who have never even heard the word. We ignore discipline ; " the cane is as out of date as the thumb-screw," a wealthy and titled lady once told me. And then we parents wonder at the inexplicable phenomenon when the lad " goes wrong " and prefers his own way to following our paltry and limited " experience," which rests on its own *obiter dicta* without a principle to back it.

I could give instance upon instance of early encouragement by parents of the self-will, the eager desire for pleasure at all costs, and of the mental apathy which are the chief causes of wrecked lives ; instance upon instance of resistance by parents to the discipline of habit and duty which alone can make honourable men ; instance upon instance of their ignoring the only stable foundation for honour —the loyalty of a young soul to the Father in heaven, who is no churchy abstraction but the Living GOD who rules a free world by Consequence and Law.

These things are true, and this temper is not going to be altered by the war in Flanders, though many will shelter their degeneracies behind the

30 per cent. of our manhood which has come forward so nobly for the defence of the Motherland.

Twenty years' experience has shown me that the average boy is nearly, if not quite, as capable of appreciating principles as the average man ; for what is lost by the tendency of the immature mind to hard-and-fast definition between true and false is gained by its freedom from self-interested bias. It is only when required to draw inferences or to generalize that the immaturity of the mind is conspicuous. It can see principles as the eye sees colour.

Two different acts of a boy's mind are often confounded together by parents and teachers—his power of understanding facts and principles on the one hand, and of generalizing from them on the other.

From this confusion of mind on the part of those who have the direction of children two mistakes commonly arise : Facts and principles are withheld as being " beyond their years," and the conclusions or pre-judgments of older minds (which really are beyond their powers) are inculcated as facts. As these are quite foreign to the boy's own mental processes he only retains them, if he retains them at all, by an effort of the memory and not of the understanding, and therefore they do not influence his conduct. To this initial error in Educa-

tion is due also that inability in after-life to distinguish between facts and opinions which is at the root of so many idle controversies.

Boys and girls require a common-sense working philosophy of life based primarily on the example of their parents, but also upon their own *perception* of the Presence of GOD in all Nature as Power, and in themselves as Friend and Guide.

They rarely get this from the Church, and scarcely ever from the literal presentment of the Bible, but not infrequently from religious instruction which fearlessly follows ascertained facts, and is based on the actual operation of the Living GOD in the world and in the heart. To aid such a working perception is the purpose of this book. It is little more than the matter which I have, in recent years, put Sunday by Sunday orally before my Bible classes. It is published because it used to excite their vivid interest, to convert the dullest and most unreal of all school lessons into a pleasure alike to teacher and taught, to give the intellectual basis for morality which is often sadly to seek, and not to be beyond their comprehension.

Textual criticism of the Bible is quite out of place for adolescents ; it is remote from all their interests. Literalism produces a disbelief the more profound for being unexpressed. The following pages embody the solution which my colleague

and I found successful in awakening reverence and the faith which has nothing to fear from any discoveries soever because Reason is not its opponent but its firm ally.

The idea of the Unseen Power and the Unseen Friend is the foundation for all real and durable religion.

As soon as we begin to think, we find that the idea of duty is logically inseparable from the existence of GOD. For it means standing for Right as against Inclination ; and Right can have no ultimate meaning but the expression, in word and deed, of action in harmony with the hidden spiritual laws which make the results of right-doing beneficial and of wrong-doing injurious. When our consciousness awakes to this truth we perceive and love the things that are true, beautiful, and of good report.

Intelligent children wish to know these things, and are perfectly capable of understanding them, and if we are to train up a generation in which the present horrors cannot recur, we must recognize that the volcanic passions are the reality rather than the eruption which is their result. This war and all its barbarities are but the result of a certain frame of mind—the Greek ὕβρις,[1] the Roman

[1] The Greek word for the arrogance that knows no pity and is incapable of love.

superbia—a view of life already old when the Prince of Peace said, "Blessed are the law-abiding [1] for they shall inherit the earth." If we would have peace in the world we must set in motion its true and only cause—the Goodwill which fears GOD and therefore fears none other; which loves GOD and therefore loves all that He has made. We must open the eyes of our children to the Divine action in the world as a quite familiar and simple fact, not a recondite abstraction which has no obvious bearing on their lives.

It is to this end that the book is written.

The chapters on the Mystery of the Body and the Mystery of the Heavens owe their inception and part of their treatment to a little book, anonymous and long out of print, called "Views of the Creation," printed by W. Folds, 59 Great Strand Street, Dublin, in 1833. At that date it was inevitable that Paley's Argument from Design should be the framework of any book which aimed at showing the Presence of GOD in His works.

[1] The word "meek," used in the A.V. and the R.V. as the translation of the Greek πραεῖς, has unfortunately come to mean "spiritless," or even "cowardly." The contrast is really between πραεῖς—the men who are law-abiding, self-effacing, and open to reason, and the ὑπερφρονες—proud, overbearing, and self-willed; who will have no law but their own desires; and the beatitude, which is also a prophecy, is even now in process of fulfilment, when Justice and not violence shall be the arbiter of national disputes.

In bringing its information up to date I have recast an argument which was false in form rather than in substance, being based on the notion of an instantaneous creation *ab extra* instead of an evolutionary development. The idea of "Creative Evolution" [1]—spiritual formative power realizing itself in material forms—which is the latest advance into the philosophy of causation, and has superseded cruder notions of the Origin of Species, is not touched upon, though it underlies all that is here put forward.

The force of the argument, "He that made the eye, shall He not see?" is quite untouched whether the creation were instantaneous or evolutionary.

One word in conclusion on the method of using the book. It is not intended that any portion should be "learned," but only read with interest.

One section at a time read by, or to, intelligent children and then a talk about it is the best plan to follow.

[1] H. Bergson, "Évolution Créatrice."

FOREWORD

(Addressed to Boys and Girls)

My dear young Reader,—

If you notice that this book is written "by a head master" you will probably think that he wants you to take some opinions of his, for your own good!

If so, you will be making a mistake. **It is a book of facts, and I have taken a good deal of pains to keep my own opinions out of it as far as possible and stick to facts which can be proved.** It has been written because I have found that although boys and girls are often inattentive to the instructions of parents and teachers, they do want to know facts about Nature and human life. If when you have any difficulty in understanding any passage you will remember that the words state plain facts, your difficulty will disappear by a little careful thinking.

When you are older you may hear one of the

saddest phrases in which failure has been written—

Si la jeunesse savait : si la vieillesse pouvait,

which means that youth makes mistakes for want of knowledge, and age for want of power. But there is one way in which this difficulty can be got over : it is, when age and youth are friends. One of my boys wrote, years after he had left school : " You never seemed to me a schoolmaster, but just a friend." No words of his could have given me more pleasure. If you, my young reader, will look at what is here written in the same way we shall be friends, even though we may never meet.

I have called this book, which I have written to help boys and girls, " Mysteries of Life," because the word " mystery " is seldom used in its right sense.

In ancient Hellas, when a man desired to know the inner meaning of things, he was " initiated " into the Mysteries of Eleusis. We have no record of exactly what those mysteries were, but we can make a very good guess at them from other " initiations " in other times and in other lands, and from the nature of men and women throughout the world.

From all these initiations it is clear that a

mystery is not "something which no one understands," but something which we can understand when we have had it interpreted to us. To have had this interpretation is to have been "initiated."

The word "mystery" was also used in former times more than it is to-day to express a skilled trade. An old author says: "Painting is an art and a mystery, not to be understood of the vulgar," meaning that it needs long practice and trained understanding; it involves all the difference between the "artist" and the "artizan."

Our LORD JESUS CHRIST, when His disciples asked Him the meaning of the parable of the Sower, said: "To you it is given to know the mysteries of the Kingdom of Heaven"—that is, He said that mysteries can be known. He did not say that they can be fully comprehended and grasped all at once, but that they are not "unknowable," and we have His promise that more and more knowledge and wisdom and power shall be given us, that we may see more and more clearly and approach nearer and nearer to the Heart of Love that created you and me and all the world.

So all mysteries can be understood: it is only a question of our minds being awake. If our eyes are shut to beautiful things and we pass them by unheeding; if our ears are dull to hear the great

and true stories of the men and women who have striven and endured; if, intent on our own pleasures, we harden our hearts and wish to use our fellow-creatures for our own selfish advantage, instead of giving pleasure to others and making friends with them, we may live in the midst of wonders and mysteries, and not only shall we not understand them, but we shall not even know that they are there till we wake up beyond the gate of Death and see all we have lost.

A "mystery," then, is that which we do not yet fully understand; when we do understand, it ceases to be a mystery. It is only to the entirely wise and to the entirely stupid that there can be no mysteries. Animals see no mysteries, and while men are like animals—caring only to eat, drink, and enjoy—they see no mysteries anywhere.

As soon as the mind awakes we begin to wonder, and to seek to know many things. As in the Bible allegory, we would pluck the fruit of the Tree of Knowledge, and know all things, both good and evil. Now, the mysteries with which we are surrounded are, first of all:—

The Mystery of the Body—how it works independently of our own will and is one's self in one sense, and not at all one's self in another sense.

The Mystery of Nature—how, though inanimate and unconscious, it brings forth leaves and flowers and fruit, each true to pattern, after its kind—which is the Mystery of Creation and Growth.

The Mystery of Sex—why there should be male and female halves of the human race, and of all living creatures that have hearts. And lastly—

The Mystery of Pain—why certain courses of action are RIGHT and lead to health and happiness; while others, which nevertheless seem pleasant and attract us, turn to dust and ashes, give pain instead of the pleasure they seemed to promise, and lead to decay and death.

These four together make up the great Mystery of Life and Death—what we are, whence we came, and why we are in the world at all, which is the Mystery of the Kingdom of Heaven.

Now, if you do not feel these things and do not care to know them, or if you think them bookish and unreal, you had better shut this book at once. It will not interest you. It is not your *duty* to be interested. Our duty is to do right—it is not our duty to think in any one particular way. Only, if you do not feel these things you are not yet fully awake.

To my young reader who is awake, and has begun to wish to know the meaning and purpose of life, who is willing to take thought and care, this book offers to show the first steps towards complete answers to these great questions, to "initiate" you—that is, not to tell you what I think about them, but to enable you to see for yourself the first and simplest answers to them, to answer, in fact, the questions, WHAT? HOW? and WHY? which intelligent children so often ask.

And I do this with confidence that you can understand, because the Master of all Wisdom said: "Suffer the children to come unto Me, and forbid them not, for of such is the Kingdom of Heaven." It is the will to understand that brings us to Him, and He gives us the power.

ANALYTICAL TABLE OF CONTENTS

CHAPTER II

PART II

HOW?

CHAPTER III

PART III

WHY?

CHAPTER V

CHAPTER VI

CHAPTER VII

CHAPTER VIII

PART I

WHAT ?

MYSTERIES OF LIFE

CHAPTER I

THE MYSTERY OF THE BODY

1. Has it ever come to you to wonder how the world came to be—how you see and hear and feel, how the food you eat is transformed into flesh and bone, how it is that every person has similar limbs and organs, and yet different faces and forms?

I am sure you must often have wondered what you will do when you grow up—what sort of life you will lead. You may have asked yourself the question, What part have I myself to play in this wonderful world into which I am born?

This is a question which no one, not even father or mother, can answer for another, and very few can answer for themselves. But it is not a very difficult question to answer if we set about it in the right way; and for each of us it is one of the most interesting questions possible. And I am sure it is one which occurs to thoughtful boys and girls from time to time; for we live in the midst of great wonders and mysteries, and thought-

ful children—sometimes very young children—ask very far-reaching questions about these things as their minds begin to awake. Sometimes they get wise answers and then they go on waking up: sometimes they are put off with half-answers or no answers, and their minds go to sleep again. For I think that the real difference between those whom we call intelligent and those we call stupid is often the difference between a mind fully awake and a mind only half awake.

The difficulty of finding the answer arises from the fact that few men, and still fewer children, ever think of putting their own feelings and desires on one side in order to think out the answer quietly.

Our parts in the world must depend largely on the purpose and meaning of the whole, and I hope in these readings to be able to show you something of what this meaning and purpose are. You can then decide for yourself what you consider best worth effort to win and where your own happiness will be found.

2. Evidence of purpose in the world.

If we consider the facts and laws of Nature—how they came to be what they are and the actual purposes served by them—we can scarcely fail to perceive a meaning for them all. And with the certainty of a meaning each of us will perceive what he or she can do to be in harmony with that meaning, and so to find a line of conduct in life which will give happiness in doing the thing we are fitted for.

To get at that meaning we should always consider what is the actual purpose served by the things around us, and how they have been adapted to those purposes by the Divine Power by whom they were created and are sustained.

Everywhere we shall see the adaptation of means to ends. And if we would understand something of the Creator of the world, if we would form true and worthy ideas about GOD, we must turn from our own fancies about GOD to the facts around us, and consider: (1) WHAT the world of Nature and the world of Man actually are ; (2) we must proceed to the laws under which they develop, and learn HOW they came to take the forms we see. We may then acquire a true notion of their meaning—that is, WHY they exist, for what present and future purposes. This is to understand, up to the measure of our capacities, the meaning of the world ; this is to be INITIATED into its mystery and to be able to choose our path therein with decision and certainty.

To be complete, this "HOW" would involve the study of all Science and all History, for Science tells us about the laws of Matter and Force, and History records the facts and causes of the rise and fall of nations. But I hope by a few instances to enable my young reader, without a very great deal of study or time, to see for himself (or herself) enough of these laws and causes to get some clear notions WHAT this world is like, HOW it grew, and WHY things are as they are.

When we have formed the habit of so considering Nature we shall also have discovered the

real meaning of religion, the world itself will be our temple, and our whole life one continued act of admiration, gratitude, and love. For we shall see all around us the evidences of a Power without bounds, a Wisdom which includes all knowledge, and a Love which formed us and all creatures for happiness and guides us to that happiness if we will open our eyes and lift up our hearts. The change is this—that whereas formerly GOD was seldom in our thoughts or was perhaps imagined as a distant Taskmaster, we can now scarcely look upon anything without thinking of the Power that brought it into being, the wisdom which adapted it to its purposes, and the love which appointed its place in the world.

The adaptations which we meet with in the natural creation surpass by far all the contrivances of mechanism in number and variety. In a multitude of cases they are themselves mechanical, and as fitted to their purposes as the most perfect products of human ingenuity.

3. The Eye: its structure and working.

If, for example, we compare the eyes of different animals, we shall find one plan laid down for all, that which we know as a photographic camera. There is a lens, very like a glass lens in shape, filled with a very bright, transparent fluid. Just in front of this lens is the "iris," a kind of coloured screen with a circular hole in the centre. This hole is small when the light is strong and large when the light is weak, as you may see for yourself by shading the eyes of one of

your companions for a while and then removing the shade in a bright light ; you will see the " pupil," which is the hole in the iris, contract.

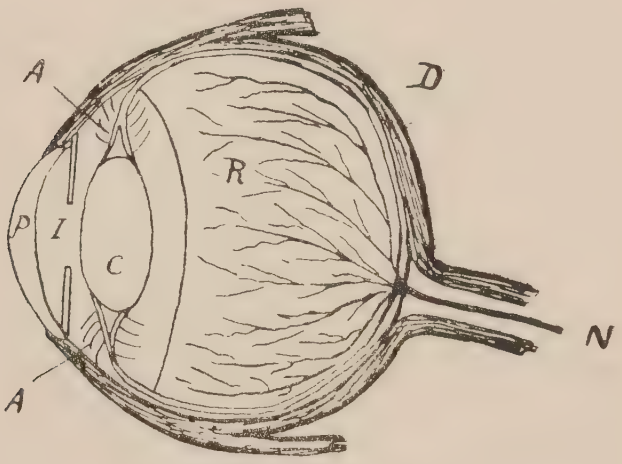
Behind the lens is the hollow of the eyeball, a hollow sphere filled with clear, transparent jelly, and at the back of this there is a delicate black network of nerves—the " retina "—which is altered (no one knows how) by the form and colour of the images thrown upon it by the lens. There is a very perfect focussing arrangement. Lenses of much curvature have a short focus, lenses of flat curvature have a long focus. The same glass lens will not focus objects far off and those close by without distorting them ; but there are two devices in the eye by which this purpose is attained—some little muscles flatten the lens slightly when we look at distant objects and bulge it for those near at hand. And the retina, instead of being a flat surface like the plate in a camera, is the inside of a sphere, which arrangement does away with the difficulty of focussing the distance of a landscape and its foreground at the same time.

The diagram will show this clearly. R is the retina and a few of its nerves ; C is the lens; I is the iris ; AA are the muscles which flatten the lens ; P is the glassy surface of the eye, of which we have not spoken as yet. N is the nerve-trunk which conveys impressions to the brain.

Nor are these all the wonders connected with sight. If we had but one eye, we should see all objects as flat and not solid. Put a bandage over

one eye, you will find that you can no longer judge correctly the distance of objects near at hand; the two eyes, which see a little more than half-way round objects, are needed for this.

But perhaps the most marvellous fact of all is that the little picture thrown on the retina by the lens of the eye (precisely as the lens of a camera throws the image on the ground-glass) is translated into the sensation of SIGHT. Strictly speak-



SECTION THROUGH THE EYE.

ing, it is the brain and *not the eye* that "sees." An impression of some sort is made on the retina and is conveyed to the brain along the optic nerve (N in the diagram), and by the brain it is translated into the sense of SIGHT. If the nerve be injured or the area where it enters the brain be diseased, the patient cannot see, though the eye itself may be perfect. The prospect from the highest mountain covers a space on the retina not

larger than a sixpenny-piece ; the image of a carriage, driving for half an hour, passes over only about one-eighth of an inch. Yet this change of place is distinctly perceived all the while as a great distance.

But the closer we look into Nature the more apparent it will be that with GOD nothing is too small and nothing too great to receive the fullest adaptation to its purpose.

Let any one who has never reflected on the value of sight think what would be his feelings if his eyes were closed in darkness ; if he could look neither on the cheerful sun, nor on the green fields, nor walk without fear of danger approaching unseen, nor could look on the faces of those dear to him.

Let us also bear in mind that the eye is the tenderest part of the human body, and yet it has to be constantly exposed in order to serve its purpose of sight. We shall then perceive also that every part belonging to it shows extraordinary care for its preservation from injury.

It is lodged in a strong, deep, bony socket, composed by the joining of several different bones, hollowed at their edges to form a kind of cup. Within this cup the eyeball is bedded in fat, of all animal substances the best adapted for its repose and motion. It is further sheltered from the sweat and moisture of the forehead by an arch of hair —the eyebrow—which, like a thatched penthouse, turns the drops aside. And as motes and insects approach it the eyelid is always ready with extreme quickness to defend the eye from injury, as

well as to moisten it and to close it for sleep. And it does all this without our thought or attention.

Is not this wonderful? Are there any purposes discoverable in any work of man soever in which design is more evident than in the purposes which the eyelid fulfils? If such things pass unobserved, it can only be because they are so familiar that we pay no attention to them. In order to keep the eye moist and clear (which qualities are necessary to its brightness and use), a wash is constantly supplied to it, and the superfluous brine is conveyed to the nose through a hole in the bone as large as a goose-quill. When once this fluid has entered the nose it spreads itself on the inside of the nostril, and is dried off by the current of warm air which, in the course of breathing, is constantly passing over it. And in animals, which, having no hands, cannot help themselves in case of some foreign body getting into the eye, there is a membrane provided which passes back and forth over the eye and cleanses its surface.

What admirable contrivances, not merely for keeping the eye in that state on which sight depends, but also for carrying off the moisture which, having served its purpose, is no longer needed! Were we to consider deeply even this alone of the works of the Creator—the eye, its coats and its humours, its transparency, the lens conforming to all the laws of light, the sensitive and self-acting iris and eyelid, the retina and nerve which translate the vibrations of light into form and colour, all

forming an apparatus so manifest in design, so exquisite in contrivance, so precious, so infinitely beneficial in its use—this alone should be sufficient to call forth all our feelings of admiration and thankfulness.

It would be quite absurd to say this perfect arrangement could have come into being by the efforts of a blind creature to see. A clod, a pebble, a liquid drop might be supposed by the ignorant to be the effects of chance, but never was an instrument of any kind so produced ; *that* proceeds from thought and skill, and from power to give effect to that thought and skill. And the essential difference between the skill of the workman and that of the Creator is that the man produces the effect by moulding and shaping matter from the outside of it, the Divine Artist acts from the inside of Matter, by means of the natural laws which we call "Growth." But as the eye consists of millions of tiny cells, each fitted to a particular purpose and all put into place to make the organ, it is surely obvious that these cells have been formed and guided into place by a great Intelligence. The more perfect the arrangement the greater the Intelligence displayed. As surely as we know that wherever there is motion there is force to produce that motion, so surely wherever there is order there is Intelligence to produce that order. That we should doubt this because we do not see the workman only shows that we must correct our ideas of how GOD works, and not fancy that things "grow" of themselves.

And in this sketch of the functions of the eye we have not explained one-thousandth part of what the microscope reveals ; the closer we look into its structure the greater seems the adaptation of each tiniest cell to its purpose.

4. The Ear: its structure and adaptation.

If from the eye we proceed to examine the ear, we shall find that the same adaptation of the one to the laws of light is repeated in the other for the laws of sound.

It will be difficult to explain all the parts of this organ, because for such understanding it is necessary for you to know that musical notes are really "waves" ; which beat, not up and down like the waves of the sea, but to and fro many times per second ; also that the intervals between notes or "tones" follow certain definite mathematical laws. Music, in fact, is mathematics made audible, strange as this may seem to you. It is easy to show that every note really consists of a certain number of beats. For if you hold a card or a strip of tin against the teeth of a slowly moving cog-wheel you will hear a series of "ticks," and if the speed is increased these will run into one another and make a hum. If the wheel is driven still quicker, the hum will rise into a musical note, shriller as the speed is higher, till it becomes too shrill to hear.

The lowest note we can hear has about 16 vibrations per second, the highest about 5,000. The middle A on the piano has 435 vibrations per second, and if we arrange the notes above it

as an octave, the numbers of vibrations per second are as below :—

Note	A	B	C	D	E	F	G	A
Intervals ...	1	$\frac{9}{8}$	$\frac{5}{4}$	$\frac{4}{3}$	$\frac{3}{2}$	$\frac{5}{3}$	$\frac{15}{8}$	2
Vibrations per second	435	480	544	580	652	725	815	870

It will be noticed that the number of vibrations is doubled for each octave as we go up the scale.

The nerves of the ear have attached to them little rods, which vibrate at the same speeds as the musical sound that reaches them. This is the true organ of hearing—the "internal ear." The external ear is only a shell to catch the waves of sound ; from it a passage leads to the true organ of hearing—the internal ear. If this passage had been fleshy, it would have deadened the sound ; it is therefore formed of gristle or "cartilage," a tough, smooth substance which does not dull the sounds passing over it. At the bottom of this passage, and stretched across a circular opening in the bone of the temple, is a thin, dry, firm, transparent skin, like the skin of a drum ; against this cartilage the waves of air strike, and are transmitted to the little rods and the organ of hearing. Its sensations are carried to the brain by another nerve-trunk, similar to the one that proceeds from the eye.

Inside the ear are three small bones, fastened to the ear-drum and to the nerve of hearing ; they serve to tighten or loosen the ear-drum to adapt it to the intensity of sound, just as the iris adapts

the eye to the intensity of light it has to bear. If the noises are too loud these little bones, without our knowing it, move a muscle which relaxes the ear-drum ; and when the sounds are low or the hearing imperfect, they stretch it so as to make the ear more sensitive.

There is also another point of resemblance between the ear and a device which has been found to increase the resonance of a military drum. It is found that if a hole is provided to allow a little air to pass out the drum-head sounds better. Just such a hole is provided to the inside of the ear, communicating with the mouth by a long, narrow tube, called the " Eustachian tube." If you hold your nose and press a little with your breath, you will feel two little clicks in your ears ; these are caused by the tube opening or stretching.

Let us consider the purposes for which all this wonderful mechanism is contrived. The sense of hearing warns animals of the approach of enemies, and enables us human beings to communicate to each other our fears, our wants, our sorrows, our joys, and our ideas. It enables us also to use that marvellous language of music, which is such a solace and a delight.

Is it not wonderful that those nerves should be able to distinguish a few more or a few less vibrations per second, and that those which show the true ratios above named should produce a sense of harmony, and that those which do not show these ratios should produce " discord "?

5. Digestion: how lifeless food becomes living flesh.

These senses of sight and hearing are our instruments, but they are not our real selves. If when you lie in bed on a dark night quite still, you consider your own sensations you will feel that eyes and ears and muscles are there as the servants or instruments of your real self—your soul. At such times of silent thought you can feel quite surely that your body is not your real self, though in daily life and action it seems to be. Besides our own intelligence, there resides in our body another Intelligence which performs many acts, to which our own would be unequal. In the organs of our body which we do not consciously use, this Intelligence works for our health and well-being.

In the stomach, for instance, we shall find as perfect an adaptation to the laws of chemistry and physics as in the eye to the laws of light and in the ear to the laws of sound.

In the human stomach what a variety of substances are in a few hours "digested"—that is, reduced to a uniform pulp. This is done by the action of a most extraordinary liquid, called the "gastric juice" and by another peculiar liquid called "bile."

The gastric juice dissolves all substances that are fit for food, except fats—all kinds of flesh, seeds, and fruits of plants, roots and leaves, all yield to its solvent powers. But before any fat can be digested it must be dissolved, and, as you know, no fat will dissolve in water. But fats,

in contact with substances like soda, turn into "soaps," and are then readily soluble. If you shake up a little oil and some "caustic soda" in a test-tube, you will find that the oil will all turn into soap and can then be dissolved in water. Now, the bile, which is a bitter, yellow fluid, contains a stuff like soda, and this turns all the fats we eat into soaps and makes them digestible.

In the museum of Guy's Hospital, in London, are a number of clasp-knives. These were taken from the stomach of a foolish sailor who used from time to time to swallow clasp-knives for bets. The gastric juice had done its best. It had even dissolved the horn off the handles of the knives, but the brass parts are left, and these strange things in the foolish man's stomach caused terrible pain and ulceration, and his stomach had to be cut open to get the knives out. So do not put anything into your stomach that is not proper food, or you too will have great pain. If you eat only what is good for you, your stomach will do you good service all your life.

It is curious that this fluid, which is so powerful in its action, is as mild as spittle, which it much resembles. Another very curious fact is that it does not dissolve living flesh, though it will dissolve the same flesh if dead. There have been cases of sudden death in which it has been found that part of the stomach itself has been dissolved by the gastric juice after death—but this never happens during life. Consider these properties of the gastric juice, and you will see that it deserves

the name that it has sometimes received—" the chemical wonder of animal nature."

The gastric juice is so powerful in its action that on experiment it was found that a quarter-ounce of beef in the stomach of a crow was nearly dissolved after a very few minutes. It is not affected by heat, for the cold maw of a codfish will dissolve the shells of crabs, much harder than the sides of the cod's stomach ; but the gastric juice of a hawk will not dissolve grain, nor will that of an ox digest meat. That is why we must feed animals on the food to which they are fitted in their natural state.

Food, of whatever kind, having been converted into pulp in the stomach by the action of the bile and the gastric juice, and by other fluids secreted by the digestive organs, is reduced to a uniform paste and is now fitted to yield its best nutritive part (called " chyle "), which closely resembles milk in appearance. This liquid, into which the nourishing part of food is transformed, is taken up by the smaller intestine. This is a tube, some thirty feet in length, provided with thousands of small pipes as fine as hairs. These pipes, which are so fine as to be scarcely visible, branch off from the intestine, and have their other ends united in a bag, of size sufficient to hold about two tablespoonfuls. In this bag the chyle is collected. From this vessel a main pipe proceeds, climbing up the back part of the chest, and passing along the gullet till it reaches the neck, and there it discharges into a large vein which conveys the blood (now mixed with chyle) to the heart. Who

could have dreamed that there could be a communication from the intestine to the neck, though there are obvious advantages in putting the nutritive matter into the blood at the point where it is going to the heart to be driven all over the body.

You must not suppose that now you know all the wonders connected with digestion and nutrition. All that has been written here is but the merest rough sketch of the process in our bodies whereby lifeless food is converted into living flesh. The full detail would confuse you hopelessly ; the very names of the chemical substances which the digestive fluids contain would be more than you could learn or remember. In this also the more closely men observe the more they find to learn. It is ever thus with the works of the Almighty Power. We may take to pieces the most delicate mechanism that man can make and put it together again, and then feel sure that we have come to the end and know all about it. But with living things we never come to the end and know *all* about them—there is always much behind that the wisest do not know. Wise men are continually learning and finding pleasure in discovery.

6. The Blood: disposition of arteries and veins.

We traced the process of digestion as far as the pouring of the chyle into the great vein of the neck. We will now consider the blood, which is the carrier of nutrition to all parts of the body. Here we shall find a provision more wonderful than anything we have yet considered. For the blood is the seat of creation. Creation does not

mean "calling something into being out of nothing"—that is what people used to think once upon a time—it means making a new thing by forces interior to it.

The blood is the life. All living tissue—flesh, bone, cartilage, fruit, the stems and leaves of plants—all consist of cells, tiny living bodies that can grow. You boys of my classes have seen these under the microscope, in the young shoots of growing plants. If you do not remember, cut a very thin slice with a very sharp knife and place it under a strong magnifier—the circles you will see are the cells cut across—"in section." But cells are not all globular. Some—those in muscle and wood, for instance—are long and fibrous, or spindle-shaped like the cells you can dissect the pulp of an orange into; and some have become old and have lost the power of growing any more, like the cells of which your skin is composed. These are thin, flat scales, too small to notice, closely matted together. So also the heart-wood of trees, the bones of animals, hair, and nails, are all made of cells that have finished growing. But all our organs—skin, bone, hair, muscles, nerves, and "tissues"—that is, woven structure—of all kinds, are composed of cells. Our bodies consist almost entirely of cells.

How do these cells grow?

To answer this question we must leave the human body for a while and look at one of the very lowest forms of life. At the bottom of the deep sea, and sometimes in ponds and other waters, is found a kind of transparent, jelly-like body, called an

Amœba. It is just a little lump of jelly ; it has no head nor tail, no stomach, no visible organs of any kind. But it is alive—it can grow. It can digest. When it is in contact with some tiny thing that can serve as its food, the Amœba just flows over it. Presently the speck of food appears in the middle of the body of the Amœba, and then it disappears—the little lump of jelly has digested it and grown so much the bigger. When it has grown to a certain size it gets hour-glass shape, and finally splits in the middle into two.

Besides the Amœba cells there are other simple cells, a little more perfect in type. A true cell has a skin covering a jelly-like body, and in the middle of this jelly are two small, dark dots, which are called "nuclei." [1] Such cells grow in the same way as the Amœba—by absorbing their food through their skins. When such a cell has grown to its full size the two nuclei split and become four ; they move apart, one pair to the right, the other to the left. Presently the cell takes the shape of an hour-glass, then of a figure 8 ; then it splits into two cells, which start in life on their own account and do as their parents did. In this way cells increase in numbers, sometimes very fast indeed. The cells of a mushroom, for instance, become millions in a few hours. One cell becomes two, the two become four, the four become eight, and so on. If a cell takes, say, one hour to grow big enough to split, then as there will be twelve splittings in a day, it will at the end of one day have become 2,048 cells ; and

[1] Plural of "nucleus," which means "the kernel of a nut."

after twenty-four hours it will have become 7,923,008, nearly eight millions, as you may reckon out for yourself very easily if you know your "Geometrical Progression" in Algebra.

This is the way in which cells grow all over the body, though not quite so fast as this. It is the blood which takes their food to them, that food being the chyle that is poured into the blood at the rate of from one to two quarts a day. It disappears into the cells as fast as it is formed. The chyle is not living—the blood is alive. Every day and all day, and more especially at night, the great gap between the living and non-living is bridged over by processes which tax the knowledge of the wisest of us to understand, while yet the Intelligence and Power which performs this daily miracle is just the commonest thing in the world.

That is a part of what is meant by GOD'S sustaining power, given to the grateful and the ungrateful, the wise and the ignorant alike. This is one way in which GOD is the Father of all without exception. This is a real fact, not a figure of speech, and will give you one idea of the "omnipresence" of the Creative Power.

7. Design of the heart and the circulation of the blood.

Now let us consider the heart, which takes their food to all the cells in the body, and also takes living cells to the places in which they are to grow.

I once read a story of a very rich man who

fixed on a site for a house where there was no water. The views were lovely, and there was every advantage that can be imagined—beautiful country, high ground, neither too cool nor too hot—and no better site could be found the world over, except that there was no water and no possibility of bringing any. The architect sought long, and at last he found a small spring deep in the ground, but it had in it no more than would suffice for a small part of what would be needed for the rich man's family and servants. The architect went to report. The rich man, who liked to think that money can do everything, was delighted. He said to his architect—

"You must make this spring supply the house."

"There must be plenty of water for everybody."

"The water must always be bright and clean."

"And I will have it always flowing in fountains."

The architect worried over this for a long time, till he fell asleep from sheer weariness of thinking. And he dreamed that a beggar-girl appeared to him—a poor little child clothed in rags—and that she said, "GOD has done for me what you want to do"; and she opened her breast and took out her heart, and showed him how it pumped the blood everywhere, and that this blood was always flowing in every part of her, and that though it had to cleanse every part, yet itself was always clean and sweet. And he woke up, but he remembered the dream and tried to work it out. But this was quite beyond human skill, for water that has been befouled can never be made quite

clean again unless by being drawn up to the heavens, to be purified in the sunlight and falling back to the earth as rain. But the little beggar-girl's heart showed him how to set about some part of his problem, and he made an arrangement with filter-beds and a steam-pump, by which part of the water was purified and returned to the cistern, while part was drained away. So the rich man's problem was partly solved, thanks to the little beggar-girl, but not nearly so well as it is done in the body of each one of us by the wisdom of the Creator.

Now let us look at the machinery which works this wonderful system of blood supply.

The Heart is a hollow muscle, bedded in strong fibres. It has four chambers, with valves between them like the valves of a pump, opening one way only. By the contraction of its fibres the sides of the heart are alternately squeezed together and opened out, so that the blood is drawn from the veins by two of these chambers, and squeezed out into the arteries by the other two.

This is a simple account of this wonderful little pump, which begins to work as soon as we are born and goes on for the seventy years of our normal lives. The simplest idea you can form of its action is that by each contraction of the heart a portion of the blood is forced into the arteries much as water is driven out of an indiarubber squirt, and at each dilatation an equal portion is received back into it from the veins, the valves preventing any backflow. This produces at every stroke a movement in the general mass of the

blood equal to the amount the heart contains. In a full-grown person this is about an ounce, or two tablespoonfuls.

The blood reaches all parts of the body by pipes, called blood-vessels. These are like the water-pipes of a large city—large mains branching out into smaller pipes, and these again into still smaller ones in every direction to all places where water is wanted.

So far the water-pipes which serve a town may represent the vessels which carry the blood from the heart. But there is something wanted of the blood which is not wanted in the case of the water, and that is the carrying of it back to its source. For this purpose a reversed set of vessels is prepared, which are united at their ends to the first set and collect from them the divided streamlets into branches, and these branches are again collected into mains, and through them the blood is returned to the fountain whence it started —namely, the heart. The body thus contains two distinct sets of blood-vessels: the "arteries," by which the blood goes out from the heart; and the "veins," which carry it back to the heart. In going out the blood always passes from wider into narrower tubes. In coming back it passes from narrower into wider ones. The main arteries are formed of much rougher and stronger coats than the veins which bring it back, because, by reason of the force with which it is being pumped along, much stronger tubes are required to carry it safely. Now we find that the main arteries are defended from injury, not only by their stronger

texture but also by their position in the body, so that every possible protection is given to those parts an injury to which would usually lead to immediate death. Sometimes they creep along grooves made for them in the bones ; the under edge of the ribs, for instance, is sloped and furrowed as if solely for the passage of these vessels. Sometimes they are laid in channels protected by stout parapets of bone on each side ; this is the case in the bones of the fingers, which are hollowed out on the under side like a scoop, so that the finger may be cut across to the bone without hurting the artery which runs along it. In other cases, as in the lower jaw, the artery passes in the middle of the bone. Of those who venture their lives upon the sea it has often been said that there is but an inch plank between them and death ; but in the body itself there is in many parts only a film or thread. A cut on the wrist where you can feel your " pulse " would lead to the loss of so much blood that without medical help death would almost certainly result. For this reason the arteries lie deep in the flesh, and nearly all the arteries coming *from* the heart are well in the interior of the body and relatively safe from injury ; whereas the veins, which heal much more readily, lie nearer the surface and are the more exposed part of the blood-vessels. It is easy to see that if the blood has to reach everywhere, *some* part of the system must be near the surface, and that if this arrangement of veins and arteries had been reversed there would have been much greater risk of serious injury.

We may each of us hear and feel this beating of the heart, either by listening at the chest of another person or by feeling our own "pulse." This "pulse" is only the rush of blood down the main artery of the arm to the wrist, where it is checked by having to pass into smaller tubes. Your heart contracts about four thousand times in an hour; from which you can reckon that about four thousand ounces of blood pass through it in that time.

Now the whole mass of blood in the body of a grown-up person is about 25 lb. or 400 oz. So that a quantity equal to the whole mass of blood in the body passes through the heart about ten times in the hour, which is about once in every six minutes. The whole of the blood does not pass through the heart in this short time, circulation in small veins is much slower, but most of the blood does get back. There is another office performed by the blood of equal importance to health. The material of muscles and nerves is always being used up—really and truly used up. When you run and exert yourself in any way some of the little cells composing nerves and muscles are wasted away, and the waste products must be carried away by the blood, or they would soon poison the whole body. Both these offices—to renew these cells and to carry away the waste—are performed by the blood. That which flows *from* the heart is bright carmine in colour; its cells pass into the minute extremities of the arteries and penetrate into the flesh, giving up the materials which are required to nourish the weakened and tired

cells of the nerves and tissues which require feeding. It also carries off the waste matters resulting from the wear and tear of the body, the result being that the blood which flows in the veins *towards* the heart is of a different colour to that in the arteries ; in the veins it is dark red, almost black. When we bleed from a cut the red blood is a mixture of blood from the small arteries and the small veins ; it is not of so bright a red as in the arteries, nor so dark as the blood in the veins.

8. How the blood is kept clean.

Now I will tell you something of the wonderful means by which the blood is kept always clean.

The blood in the veins has washed out and carried away all the waste stuff that results from the using up of muscles and nerves. This waste stuff would soon poison us if it were not removed from the blood itself ; so special organs have been provided for the purpose—the kidneys and the lungs. The kidneys take from the blood the most poisonous of all the waste products—urea—a quite used-up stuff that cannot be burned, and this, dissolved in water, is called "urine." The lungs serve a double purpose : they renew the blood by getting rid of all other waste matter, and they maintain the warmth of the body by burning that waste matter. You know you must breathe in order to live, but you probably have no notion why you must breathe, and what a wonderful and economical arrangement your lungs

are. You know that fire goes out if it can get no air. Well, it is quite literally true that the air you breathe into your lungs actually burns up the waste matters of the blood and maintains a steady heat in the body by this means. The lungs are, in fact, a small, low-temperature, very economical stove which burns only waste products, never gets too hot, never goes out, and keeps the whole house you live in quite warm—just 98 degrees Fahrenheit, neither more nor less.

The lungs of all air-breathing animals are constructed for this purpose. They consist of blood-vessels and air-vessels, lying close to each other, and made of membranes so thin that air can pass freely into contact with the blood-cells. The internal surface of these air-vessels in our lungs is so great that if collected and spread flat it would cover a surface of fifteen square feet.

9. How wounds are healed.

There is a still more wonderful part played by the blood, which should show you quite clearly that there is an Intelligence which is not our own conscious mind directing its operations.

When any part of the body has been injured there is, of course, special need for the renewal of the damaged cells. This can only be effected by the blood, and accordingly much more than the usual amount of blood pours to the injured part, producing the redness and soreness which we call "inflammation." This redness and soreness show that the blood is doing an extra amount of its healing work, building up fresh cells in place of

the injured ones and causing much more rapid growth in that particular place.

Still more remarkable is the part played by the blood in dealing with the germs of disease which find their way into the tissues of the body. When a surgeon has to make a cut into the flesh he takes very special care that his instruments shall be freed from all "germs" which are always floating about in the air and shall be absolutely clean. Cuts so made usually heal at once—the blood has only to replace quite a few cells, and this is soon done. But if a cut is made by a dirty pocket-knife, not only are the cells injured but hundreds or thousands of germs find their way into the wound and poison it.

Now in some wonderful way the white amœba-like cells of the blood (which are principally concerned in the work of renewal) seem to know all about the need for their presence; and as if the word had been passed to "mobilize," thousands of them hurry to the seat of injury, and they absorb and digest the germs, thus destroying them in great numbers. There is, in fact, a kind of fight between the white cells and the poisonous germs. You know the "pus," or "matter," that forms when a cut is sore and difficult to heal. Well, this pus consists of thousands of white cells that have lost their lives in the fight with the poisonous germs. And a curious thing is that in these cases, when there is much inflammation, a great many more than the usual number of white cells come into existence, so that a doctor can tell, by counting (under the microscope) the

number of white cells in a drop of blood, whether there is inflammation in deep parts of the body that he cannot see.

Washing a wound with disinfectant helps the white cells in their fight and washes away the poison germs in great numbers; so also does merely keeping a wound clean at the outset. But is it not wonderful that there should be in those cells the intelligence that tells them where they are wanted and what they have to do? Of course, I do not mean that the little cells *know* what they are doing, but I do certainly mean that unless they were directed by Intelligence they could not do what they actually do in vanquishing disease germs and building new tissues. Here again you see the real Creative Power in action. We are much too ready to invent all kinds of fancies about GOD'S action outside of us, while we pay no attention to the working of Love and Intelligence which keeps us in life and health.

10. The "secretions."

But we have by no means come to the end of the work done by the blood. It has other functions besides cleansing the body of waste matter, keeping up the animal heat and fighting disease germs, and replacing used-up cells and nourishing growing cells.

There are about twenty quite different fluids separated from the blood, most unlike one another in taste, smell, colour, and consistency. Some are thick, some are thin, some salt, some bitter, some sweet. These are called the "secretions." By

"secretions" we mean the gastric juice, the saliva or spittle, the slippery oil that makes the joints supple, the tears that moisten the eyes, the bitter wax that defends the ear, the bile that digests fat, the milk of a nursing mother, the sweat that relieves us when over-heated, the urine which carries away impurities, and several others.

All these proceed from the blood, from the same blood-cells which are converted into flesh, fat, muscles, tendons, nerves, and the like, all as different from one another as the wood, cordage, and canvas of a ship. It is as though a ship should build herself out of a heap of wood and iron. And can you not see that Intelligence is as much required in the one case as in the other? only in the one case the shipwright's intelligence is working on his materials from the outside, and in the other case the Creative Intelligence is working from the inside of each cell. Nothing can act except where it is. And as the Intelligence which heals and builds pervades our whole frame, and as the whole of Nature is full of life, that means that the real GOD—the real Creative Power—is everywhere. This is a part of what we mean by the Omnipresence of GOD. It shows you, too, how GOD is truly our Father, not only of our souls which come from Him but of our bodies also, for it is GOD'S Creative Intelligence, and no other, which enables all these wonderful changes to take place.

The secretions of animals are of the most varied and opposite properties. Some, like musk, are aromatic; some are fetid, like the secretions of

the toad and the skunk ; some are poisonous, as in the fangs of serpents and the stings of insects ; some are nutritious food, like milk and eggs ; some are valuable commercial articles, like shellac, wax, and silk. Yet all are produced from blood of nearly identical appearance.

11. The muscular system.

Let us now consider the muscles which enable us to move our limbs.

The variety, quickness, and precision of which muscular movement is capable are seen in no part more remarkably than in the human tongue. It is worth any man's while to watch the nimbleness of his tongue, the wonderful readiness with which it changes its place, and the perfect exactness of its motions.

Each word, even each syllable, requires for its utterance a particular action of the tongue. One, and only one, position will produce any particular sound correctly. How instantaneously are these positions assumed and changed, how numerous are these changes, and yet with what certainty they are made !

The anatomy of the tongue corresponds with these requirements. Its muscles are so numerous and so interwoven with each other that they cannot be separated even by the most careful dissection.

Let us consider the parts of the mouth and some of their properties. Within the mouth there are brought together more distinct uses than can be found in the same small compass in any other part of the body ; teeth of different shapes for cutting

and grinding, muscles whereby the mill of the jaws is worked, little fountains of spittle springing up under the tongue and elsewhere for moistening the food, and glands to feed these fountains, and a muscular action of a very peculiar kind for guiding the chewed food in its passage towards the stomach so as to avoid the lungs, where the presence of food would cause death.

At the same time the cavity of the mouth is adapted to another and quite different purpose—that of breathing and speaking. For, in addition to all that has been mentioned, there is another passage to the lungs, fitted for air only.

We have muscles in the throat and mouth for the purpose of giving to the air as it passes through the mouth little impulses and vibrations which produce sounds. This is done with such marvellous accuracy that a singer will throw out the scale of sounds from 217 to 1,740 vibrations per second, rising accurately in the series 217, 245, 272, 290, 326, 362, 407, 435, 489, 544, 580, 652, 725, 815, 870, 978, 1,088, 1,160, 1,304, 1,450. The singer does not know the number of vibrations he sings when he sings a note, but the machinery of the "vocal chords," as they are called, does it for him by an act of his will.

In addition, the muscles of the throat and mouth can assume those special positions of the throat and tongue which produce all the languages upon earth.

In no work of art are there so many uses so aptly combined as in the human mouth, and yet there is none of which the structure is apparently so simple.

The mouth, with all its uses, is but a single cavity, —one machine—with its parts neither crowded nor confused, and each unembarrassed by the rest. In order that breathing may continue without hindrance in eating and speaking, two more passages to the mouth have been provided. The nostrils are of the greatest importance in infancy, for sucking and breathing are two offices which the mouth could not possibly perform at the same time. The lips of an infant are shut close upon its mother's breast, and if it could not breathe through its nose it could not get its nourishment. The making of the nose the seat of a new sense—that of smell—was giving it a new use ; but the nostrils were already wanted to allow of the possibility of every infant being fed.

The number of muscles which must work together in order that we may be able to breathe is very great. Anatomists reckon up a hundred or more that are used every time we take in and let out breath without reflecting what a work is thereby performed—with how perfect a set of instruments we are provided by the providence of GOD. Breathing with ease is a blessing of every moment, yet of all others it is that of which we possess the least consciousness. A man with asthma[1] is the only one who really knows how to appreciate it. And when the apparatus gets out of order, the efforts of our will are nearly or quite powerless to get it right.

[1] A nervous disease in which there is great difficulty in breathing.

12. The starting and stopping mechanism.

But the greatest difference of all between natural and artificial things—that is, between the works of GOD and the works of man—is that the utmost human skill can only make a machine to do some one thing and to serve some one purpose, and in all cases an external motive power must be supplied, —some engine must be provided to drive the machine. No one has made or can make a machine which starts and stops itself independently of outside influences. But this your body does every day and every night, and indeed the thing is so common that we forget to wonder at it. We will now look a little at this starting and stopping mechanism. Under the skin, all over the body, there are tiny white threads, finer than hairs, called "nerves." These, passing inwards, form bundles of nerves called "nerve-trunks," and these again form one big nerve as thick as your finger, which passes up the centre of the backbone into the brain.

These nerve-trunks differ from the veins and arteries because they are not tubes or pipes passing into larger ones, but are bundles in which each nerve is joined by others, just as many threads put together form a thick rope. These nerves convey—we do not know how—the sensation of touch. By their means we distinguish "rough" from "smooth," heavy from light, by their means we feel pain or injury, and by their means we feel, hear, see, smell, and taste.

These nerves of sensation, as they are called, are gathered into one big main nerve that goes

to the brain, just as all veins are gathered together into one great vein that goes to the heart. And just as there branch out from the heart arteries which divide until they are as fine as hairs when they reach the skin, so from the brain there branch out another set of nerves, by which you are able to move any muscle of your body over which you have power.

These nerves are like telegraph wires : the one set carry messages to the brain ; the other set carry messages from the brain to the muscles and move them.

How do we know this?

In two ways. Firstly, a patient who has one set of nerves diseased is unable to move his muscles, but can still feel. If both sets are diseased he can neither move nor feel in the " paralysed " part.

There is an incurable disease that horses sometimes suffer from, which makes them go lame in one foot. In order to save the animal pain and make him go sound, surgeons cut the trunk-nerve of sensation which goes from the hoof to the brain. The disease is not cured—it still goes slowly on—but the horse feels no pain, and can move that foot like the other ones. But if both nerve-trunks were cut, the foot would be completely paralysed—it could not be moved.

The second way by which we know of the two sets of messages is that it is possible to measure, electrically and by the aid of a drum moved by clockwork, the exact time between the contact of a needle-point with the skin and the movement of

the part affected. This time is very short—about one-fifth of a second—between the touch of the needle or a hot object and the movement of the hand away from the thing which hurts it. From the foot the message of pain takes longer—it has farther to travel. This fact that a touch takes a certain time before it is felt is the reason why a laundress can touch a hot smoothing iron with a very quick movement and receive no hurt ; whereas if she were to touch it unwittingly she would be burned—the time of contact between the hand and the iron in the latter case would be long enough to do the harm before the message of pain reached her brain and the return message came back to the muscles of the hand to move it away.

But the nerves not only carry messages, they supply power. And they do this in a very marvellous way which it will take you a little trouble to understand. If, however, you will really apply your mind to what follows you will find you have gained an idea quite new to you which will explain many things. This new idea is, that " energy " or " power " is contained in all Matter, some kinds containing much more than others.

13. Meaning of "power" or "energy."

You have perhaps seen a water-wheel driving a mill. Well, the water, after it has turned the wheel is just the same water as it was in the pool above the mill ; but it has lost its " power " or " energy." That has gone to drive the mill. Suppose you were set to pump the water up into the pool again ; you might go on till you were very tired,

or "exhausted"—that would mean that "energy" or "power" had gone out of you. That power would then be back in the water of the mill-pond above the wheel. This takes a lot of understanding, and many persons grow up without ever realizing that we live in the midst of two worlds —a world of earth, air, water, wood, metal, flesh and blood, etc., of all the things we can touch or weigh; and a world of Power which moves all these things and makes them go the way that Intelligence directs. The one is the world of "MATTER," the other is the world of "FORCE" or "ENERGY."

This is not a very easy thing to grasp, because Power is not material at all. Heat, light, electricity, magnetism, and the like, are all forms of energy. They cannot be weighed, or seen, or handled, and, strictly speaking, they cannot be felt; but their effects can be felt, and they are used to drive machinery, and they can be measured.

You have learned in your mathematics that to lift a gallon of water (which weighs 10 lb.) 1 foot high takes 10 foot-pounds of energy; and that to lift a train of 80 tons up an incline 20 feet high takes $80 \times 2{,}240 \times 20$ (= 3,584,000) foot-pounds of energy. Whether the incline is short or long, whether the train goes quickly or slowly, makes no difference: the amount of power expended is exactly the same.

So also to heat a pound of water one degree Fahrenheit takes 772 foot-pounds of energy, which is used up in doing the work of heating. The units

for measuring the work done by heat, electricity, magnetism, and all the physical forces can all be expressed in foot-pounds, just as the same value of money can be expressed in francs, dollars, rupees, piastres, etc., or can be turned into pounds, shillings, and pence.

You will find this idea hard to grasp, and you cannot grasp it without a good deal of thinking, because we all find it hard to think of things that are not material as being equally "real" with the things we can touch and see.

It may make it easier to understand if I remind you of some things we learned in class;—that there are three great orders of things that we can know of in the Universe:—

I.—MATTER, which means all that men can see, touch, or weigh. This can exist under three physical states—solid, liquid, and gaseous. Earth, water, and air, iron, mercury, and oxygen, and many others are instances of solid, liquid, and gaseous things. Most solids can be melted and vaporized, just as water can exist as ice, water, and steam.

II.—ENERGY or FORCE.—Of this there are nine common kinds—Gravity, Heat, Light, Electricity, Magnetism, Chemical Affinity, Cohesion, Nervous force, and another called Inertia, which is the energy possessed by moving weights of all kinds. There is also another called Radio-activity, of which you will hear a good deal as you grow up, as the "rays" given off by radium and other substances. It is perhaps the power which comes from the

breaking-up of the "atoms," of which I shall have more to tell you later on.

III.—MIND.—States of mind are the causes of nearly all our happiness or unhappiness. There are very many, and they exist in pairs, like positive and negative—Truth and Falsehood, Honesty and Fraud, Pride and Humility, Vanity and Good Sense, Selfishness and Unselfishness, Courage and Cowardice, Purity and Uncleanness, and many others. These are all names for states of mind, and are so very real that it is our habitual state of mind which is called our "CHARACTER"; this decides whether we are going upwards to health and strength and honour, or downwards to disease and weakness and disgrace.

All human things—houses, ships, tools, pictures, music, laws, plans of action, campaigns, all noble deeds as well as all base deeds, exist as thoughts—states of Mind—before they become visible outward facts.

That is—MIND, or SOUL, which is a man's real Self, directs the forces which shape all material things. You will see by this how important it is that we should habitually turn our minds to the thoughts which lead upward rather than to those that lead downward.

14. The world of "power" or "energy."

All the forms of power can easily be turned from one into another. When coal is burned in an engine it gives out its power in the form of Heat; that heat is turned into pressure, which

drives the engines. But it is not the coal or the steam which really drives the engine ; it is the heat which the coal gives out that does the work. Men of science have collected the gases which coal and air change into when they are "burned," and they find that the ashes and the gases together weigh exactly the same as the coal and the air required to burn it, only the energy is gone from them.

Neither the Matter nor the Energy can ever be destroyed in the sense of being annihilated ; they can only be changed in state, and put to use or wasted.

Perhaps you can understand the same thing better in another way. Everything you see—that is, all Matter—is made up of "elements"—tiny atoms of seventy or eighty different kinds. About fourteen of these are Non-metals, such as charcoal, sulphur, and gases of sorts ; all the rest are metals, such as iron, gold, copper, lead, tin, etc. These atoms combine together by chemical affinity to make all the vast variety of earth, water, air, stones, lime, brick, oil, and stuffs of all kinds—all the things we see, in fact.

Some of these compounds have much energy sleeping in them which can be awakened or released, usually in the form of heat or explosion when the atoms unite with each other in some fresh way to form new compounds. Dynamite, for instance, can explode, and wood can burn. These have much energy. Others, such as ashes, or brick, or table salt, have very little energy. As a rule the stuffs which have much energy can be

burned, while those which contain but little energy cannot be burned. The heat which a stuff gives out in burning is the energy the stuff contains.

15. Nerves have high energy, or force, stored in them.

Now, the power of life uses many sorts of compounds to build its cells with. It builds fat-cells, blood-cells, bone-cells, muscle-cells, nerve-cells, and many other kinds. Of all these, nerve-cells have much the most energy in them and are most easily used up. When being used up they are converted into compounds which have scarcely any energy left in them, such as the one we have already spoken of—urea. The waste of the muscle-cells has more energy left in it, and can be burned (and is burned) in the lungs, but the urea (which has parted with all its energy) cannot be burned; that is why special organs—the kidneys—had to be provided to separate the urea from the blood, where it would cause diseases, such as rheumatism.

This energy from the nerves is the driving-power which performs all the bodily functions. The nerve-cells are nourished by the blood, and grow; they are then full of energy. When we think, or move, or do work of any kind, some of these cells are partly used up, and some of their energy goes in doing the action. That is why real "thinking" is hard work—it uses up nerve-cells. A great deal of energy is used up in moving the breathing muscles, in the beating of the heart, and in all the actions of the body, such as digestion; and this expenditure of power goes on day

and night, though in the night, chiefly, the power contained in our food is "assimilated" by the body and is stored up for use during the day.

Another curious fact about the nerves is that some of them seem to have an intelligence of their own, a kind of local brain, which enables them to do their work without our thinking, or even being aware of what they are doing for us. It is in this way that nearly all of our organs act, without our being in the least aware of all the wonderful processes that are going on, though all our health depends on them.

16. Intelligence in the nerve-cells.

If you think over these facts you will see what is meant when we say that there is a wonderful Intelligence present in our bodies and in all Nature, which not only designs these organs according to our needs and causes their growth from infancy to manhood, but also maintains them in health and effectiveness from day to day.

This Intelligence is always present with us, whether we wake or sleep. It guides the minutest actions, it forms the new cells in a cut finger, it prepares the teeth in the jaws of the infant before birth. If we do not disobey its laws it guides us to health and strength. In the animal creation it is called "Instinct," which teaches the creatures what food to select, how to build their nests, how to provide for their young, often in the most unlikely way, some of which I hope to tell you later on. And this Intelligence uses all the laws of mechanics and chemistry that we know, and others that we

still only guess at, in the body of the youngest child or the most ignorant person and of every living thing, down to the worms in the ground. It is no part of the human intelligence. But the Intelligence is there—manifest by its works ; for just as there can be no motion without Force to cause it, so there can be no regular order without Intelligence to cause it.

And I want you specially to notice (for it is a very important and illuminating fact) that the effects which we experience in our bodies—digestion, growth, secretions, thought, and feeling—are all of them the aggregate of a number of very tiny effects, the sum-total of the work done by microscopically small cells and of atoms far too small for even the most powerful microscope to see. Everywhere that Intelligence works from the inside of things, even from the inside of the elemental atoms. Think well about this, for it is the ground-plan of the Universe, whose vast forces are not huge outside Powers, but the result of power internal to every cell and atom. Your body is like that great world in this, and is a kind of type of all creation.

17. Ever-present creative intelligence directing nerve-power.

And this Intelligence is shown by its works to act in exactly the same manner as that Creative Power which brings out the leaves and the flowers every springtime and renews the face of the earth.

That is again a part of what is meant by the Presence of GOD in the world. He who knows all

things—the Lord and Giver of Life—by whose love and care and foresight we exist, lives in us and lends us a part of His Life.

I think you will now see something of what is meant by the Mystery of the Body, and see also the truth in the words of the psalm which says :—

> "I will give thanks unto Thee, for I am fearfully and wonderfully made : marvellous are Thy works, and that my soul knoweth right well.
>
> "Thine eyes did see my substance yet being imperfect : and in Thy book were all my members written :
>
> "Which day by day were fashioned, when as yet there were none of them."

CHAPTER II

THE MYSTERY OF THE HEAVENS

1. Sunrise and sunset.

LET us turn from the consideration of the almost infinitely small cells of which our bodies are composed to the Earth, Moon, and Stars—vast bodies which, compared with the former, are almost infinitely great. We shall find there the same system of laws by which the whole Universe works in perfect order and regularity, and the same sum of small forces producing vast effects.

If you hold a bit of glass in the flame of a candle so as to blacken it evenly all over, you will be able to look at the sun through it. You should never try to look at the sun without this protection, for its powerful rays injure the retina of the eye. But through smoked glass you can see it quite clearly, as a globe about the same apparent size as the moon. If you watch it as it rises towards the east you will see that it seems to move at a quite even speed up to a high point in the sky, not quite overhead even in summer, and only about half-way in winter. You have learned that it reaches that highest point of its journey every day at noon precisely, and then

declines towards the west. It seems to move across the sky in the arc of a circle from horizon to horizon. You should know from your Geography that this sunrise and sunset are due to the spinning of the earth on its axis as it turns from west to east. But you probably do not know the great speed at which it goes, nor how it is that this steady motion is maintained from year to year and century after century. If you watch the stars at night you will see the same process going on—the stars rise and set just like the sun. How does this equal motion persist?

2. Assyrian and Greek ideas of the heavens.

The old Chaldean shepherds who watched their flocks by night saw the same thing thousands of years ago. They made the first efforts of which we have any record, to discover just what these motions are, and it all seemed to them just simple common sense: the earth must be a flat plain, with Chaldea in the middle; the sun, of course, must be hidden at night by some vast mountain; and the rain must fall from "the waters which were above the firmament"; and the sea, which you always came to if you went far enough, must of course surround the earth. So they imagined the Universe somewhat as it is represented in the sketch on the next page.

The sky was a crystal dome or "firmament" in which the Sun-god moved daily from east to west with his attendant stars. In another firmament moved the moon and the seven wandering stars or "planets." The whole earth they fancied as

resting on "the waters below the firmament," and deep down within it the ghostland—the Underworld—the abode of the dead. Now, I want you to notice that this represented what they thought they actually saw. It is only as time goes on, and as men consider more deeply and learn those laws of number and quantity which are called mathematics, that they come to perceive that the true

FIG. 2. THE CHALDEAN NOTION OF THE UNIVERSE.

explanation of what they think they see is really quite otherwise. Foolish persons keep to their own fancies, now as then; the wise learn how to correct their impressions.

The Greeks, or perhaps the Egyptians, made the next advance. From wider travel and from the knowledge of the principles of the circle they found that a star which has just reached the horizon in Greece is still one degree above it at Alexandria. Knowing the distance from Argos

to Alexandria, they worked out that the earth must be a sphere, or part of a sphere, and made a very good calculation of its size. See if you can do the same, with squared paper to help you, remembering that for so small an angle as one degree you can take the arc and the tangent as practically the same.[1] They still thought that the sun went round it, and where to put the sea bothered them, but they thought old Oceanus must have some plan whereby he girdled in the habitable land. They kept to the ideas of the crystal firmaments and the Underworld.

It was not till very much later, by the aid of instruments which measure angles quite accurately, that it was proved that the sun is much larger and much more important than our earth, which travels round it. It was quite natural that, just as the Chaldeans thought their country must be the middle of the Earth, men should at first imagine that our Earth must be the middle of the Universe. But we know now that it is but one of several worlds which travel round the sun, and that these worlds are the planets or "wandering stars." It is in this way, by gradually correcting with fuller knowledge the errors in past theories, that sciences are built up—they are the records of the results of patient observation and calculations found correct by many lovers of truth.

3. The "Solar System."

The Earth, which seems to us to be a vast plain,

[1] Compare the tangential angle with that at the centre and its "circular measure."

with hills dotted about on it, rivers flowing over it, and everywhere bounded by seas, is really a huge ball or "sphere." Ships can be seen to go over its visible edge—the horizon—and these ships, if they steer continually westward, come back to the place they started from. It is important that you should get clear ideas of its form and proportions, for without such ideas you will not be able to understand much that follows. The Earth is a ball about 8,000 miles in diameter. The highest mountains are about 5 miles above sea-level, and the deepest parts of the sea about the same distance below sea-level.

Now, 5 miles is $\frac{5}{8000}$ or $\frac{1}{1600}$ part of the diameter. If we take a school globe 16 inches in diameter, the highest mountain would be represented by $\frac{1}{1600}$ of 16 inches, which is $\frac{1}{100}$ of an inch—about the size of a very small grain of sand. And the oceans would be represented by a mere film of water, not thicker than a sheet of paper, covering three-fourths of that globe's surface. So that the omission of visible mountains on a school globe is more like the reality than if they were put in, for it should be remembered that the *average* heights and depths are less than half these amounts.

The moon also is a sphere, as may be actually seen through an ordinary telescope. So likewise is the sun—a sphere very much larger than our earth.

The sun and planets may be roughly represented to scale on a large lawn. Put down a large orange in the middle for the sun, and taking

a measuring tape, we will put in the planets in their natural order.

Mercury is represented by a small shot, 35 feet from the sun.

Venus will be a swan-shot, 66 feet distant from our sun.

The Earth will be another swan-shot, 93 feet away from the sun.

Mars will be another swan-shot, 140 feet away.

Jupiter will be a marble, 475 feet distant.

Saturn, another marble about the same size, 872 feet from the sun.

Uranus, a smaller marble, 1,760 feet away.

Neptune, a small marble, 2,750 feet (about half a mile) distant.

The lawn is the plane in which they all lie, and the sun and planets are thus represented to a scale of about one million miles to a foot. On the same scale the nearest fixed star would be about 120 miles away—so widely apart are the suns and planets scattered through space.

4. Vastness of the universe.

And this "solar system," as the sun with its attendant worlds is called, is but one of many far larger systems, all of which together make up "the Universe."

If a cannon-shot, which flies so fast as to be invisible, were to fly towards the moon at the same speed at which it leaves the gun, it would take eight days to reach its target, 240,000 miles distant, but no less than eight years to reach the sun.

This seems a long time ; but the same cannon-shot would take three thousand centuries to reach the nearest of the fixed stars, which are suns like our own, and probably have their own attendant worlds. If such a cannon-shot had started six thousand years ago, and had been flying at the same speed all that time, it would be only a step on its way ; it would still have more than sixty times as far to go.

How do we know this to be true?

By the properties of triangles. If we can measure the base of any triangle and the two angles at the end of that base, you know that you can very easily calculate the lengths of the other two sides. You know that if you shut first one eye and then the other as you look at any object such objects will seem to shift their places. That is because you are looking first from one end and then from the other of a line which is the distance between your two eyes. This line is the base of a triangle whose other two sides are the distances of the object from each eye. If the thing looked at is very far off, its position seems the same whichever eye we use.

Now the winter position of the sun is 186,000,000 miles from its summer position. If we measure the angles to a fixed star from each end of this vast line, there is an almost inappreciable difference of angle from 90 degrees. That is, the sides of the triangle whose apex is the star are so very nearly parallel that their length is the vast distance our cannon-shot would have to travel. The diagram will show what is meant.

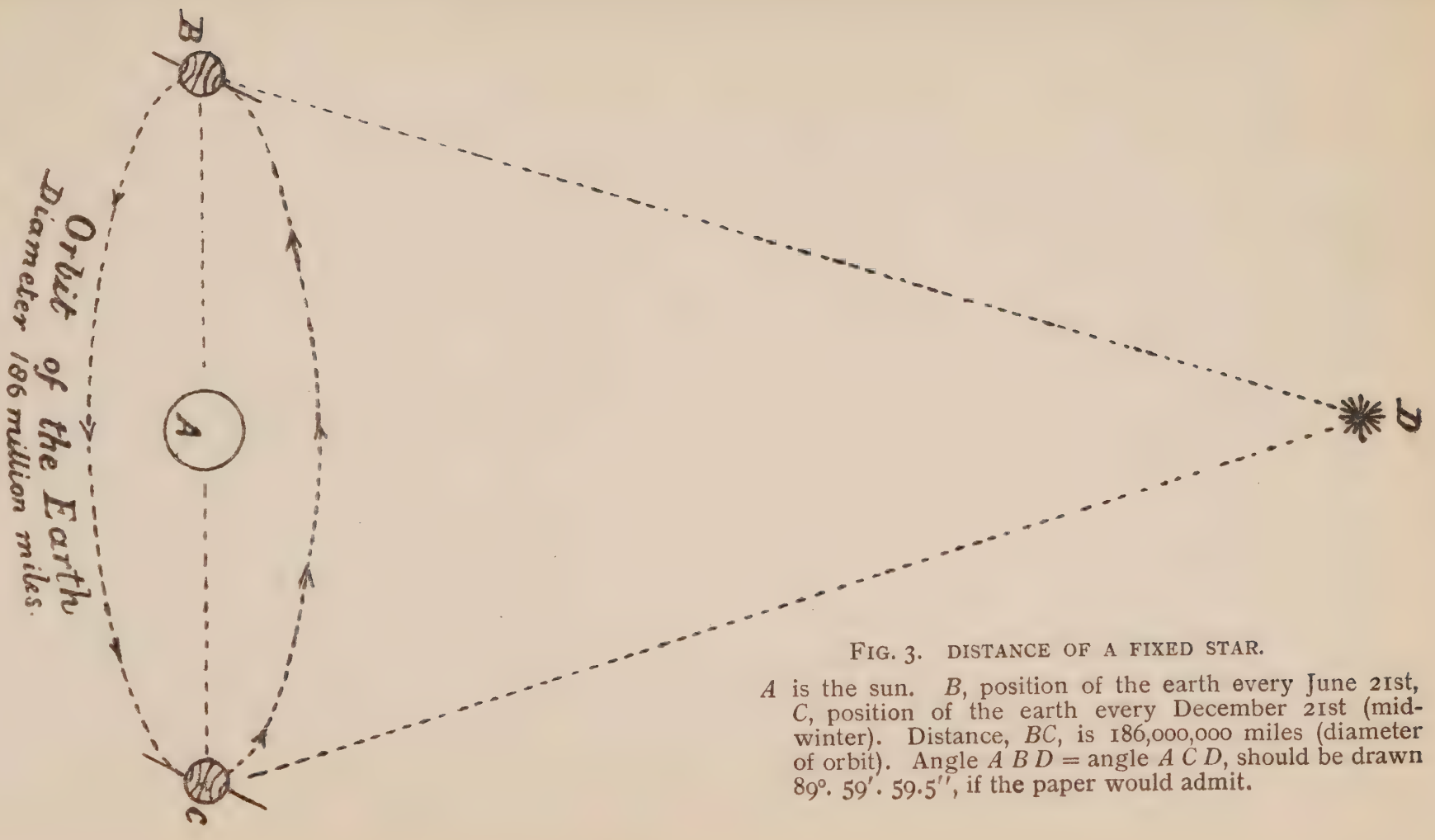


FIG. 3. DISTANCE OF A FIXED STAR.

A is the sun. *B*, position of the earth every June 21st, *C*, position of the earth every December 21st (mid-winter). Distance, *BC*, is 186,000,000 miles (diameter of orbit). Angle *A B D* = angle *A C D*, should be drawn 89°. 59′. 59.5″, if the paper would admit.

Astronomers can photograph and count more than eighty millions of such stars, probably as far removed from each other as the nearest of them is from us, probably each of them having its attendant worlds, though these are too far away to be seen at all. Does not the mind become almost giddy in trying to imagine so vast a Universe?

5. How the planets keep station.

And how are all these kept in their places? How is it that for hundreds and thousands of years there has been daily sunrise and sunset ; sun, moon, planets, and stars keeping station from age to age?

Because of an arrangement as simple as it is perfect, which can be expressed by four very easily stated mathematical facts which are called "laws," because it is found that whether the masses and energies concerned are large or small, at whatever place and at whatever time they act, they invariably and always produce the same results. It is because they can be expressed mathematically that we know them to be eternally true—parts of the unchanging Will of GOD.

These laws you should know from your mathematics. They are:—

1.—All bodies continue at rest or in uniform straight motion unless acted upon by new energy.

Those of you who have taken an intelligent grip of your algebra will know that this is expressed by the equation—

$$s = v \,.\, t.,$$

which means space travelled in feet = velocity in feet per second × time in seconds.

2.—Change of motion, both as to direction and amount, is proportional to the new energy acting.

This is expressed by the equation—

$$s = \tfrac{1}{2} f \cdot t^2.$$

3.—Action and reaction are equal and opposite.

Briefly, this means that a support presses against the weight just as much as the weight presses against the support ; every pull has a corresponding push. It would take too long to put this mathematically in a form in which you can understand it.

4.—Every particle of matter attracts every other particle with a force proportional to the product of their masses in pounds, divided by the square of the distance between them in feet.

This is called the Force of Gravity, and is expressed by

$$k\left(\frac{mm'}{r^2}\right)$$

A few instances will make these fairly clear.

That every inanimate thing remains still unless new force acts on it is fairly obvious ; but it is not so clear that a stone thrown from your hand would go on in a straight line for ever if it were not slowed down by the friction of the air and brought back to earth by the force of gravity. Yet both are perfectly true.

The second law means that every force acting on a body produces its own effect quite independently of any other force that may be acting.

For instance, if a bullet were balanced on the muzzle of a gun held quite horizontal, and another bullet were fired out of it over still water, the two bullets would reach the water at the same instant. We may represent what takes place as in the figure: the distance A B represents the force acting on the fired bullet if we neglect gravity ;

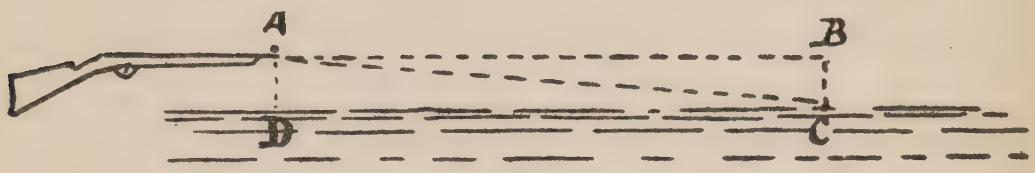


FIG. 4. GUN FIRED OVER STILL WATER PARALLEL TO ITS SURFACE.

the distance A D represents the force of gravity acting on the other bullet. If there is only one bullet, the forces A B and A D both acting on it each produce their effect and cause it to move along the line A C.

If the ball is shot vertically up into the air, it will rise till all the energy of the motion it started with is overcome by gravity ; it will then stay at rest a single moment, and will then begin to fall, and will reach the earth with the same speed downwards that it had upwards when it started. You will notice that the force of gravity acts on *particles*. Just as the power which governs the body acts on single cells, so the same power here acts on single atoms, and the aggregate effects we perceive are the sum-total of an infinite number of infinitely small forces.

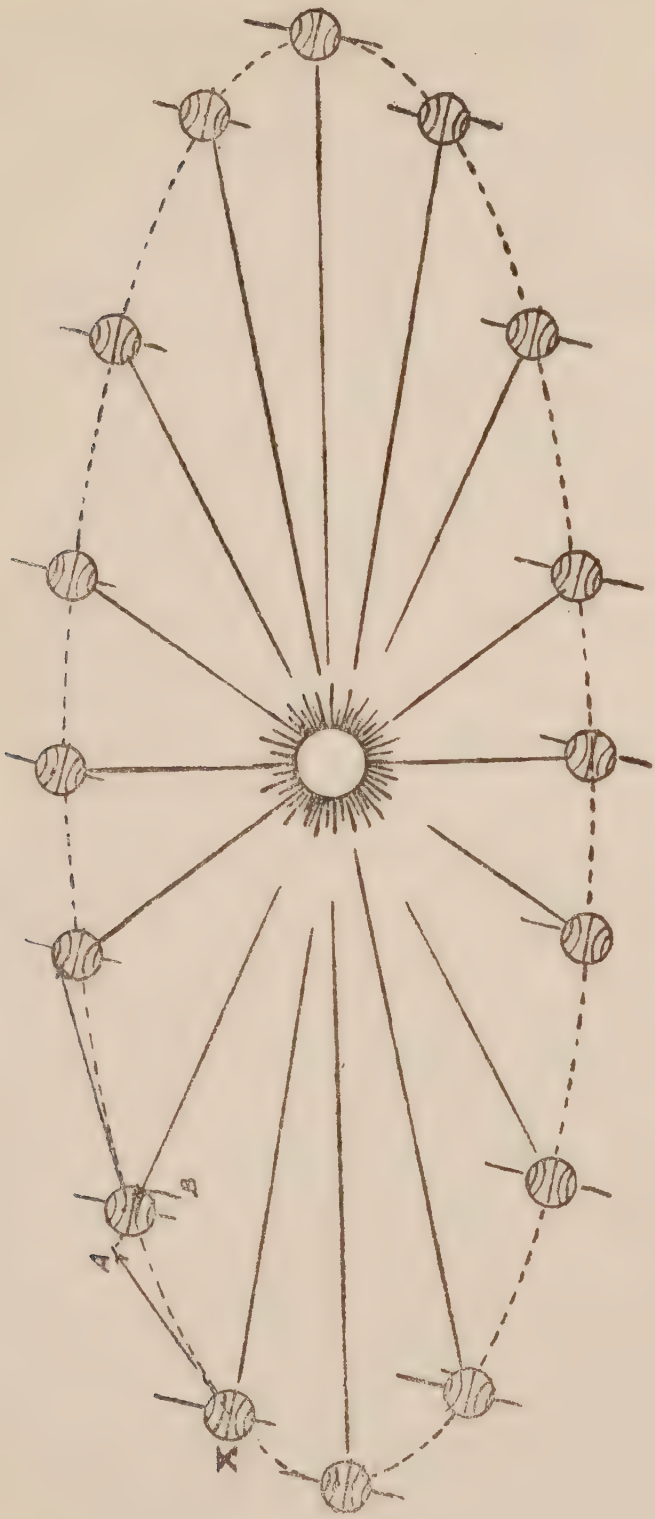


FIG. 5. DIAGRAM OF EARTH'S MOTION IN ORBIT.

Distance *A B* is the amount of fall towards the sun in travelling distance *X B*.

The mathematical laws enable us to understand things too vast for our unaided intelligence.

Let us apply them to existing facts. The Earth, weighing many thousand million tons, is travelling round the sun at a speed of about nineteen miles *per second*. In accordance with the first Law of Motion, it would continue at that speed straight out into space but for the action of another force, the attraction on its particles of the particles of the sun.

That attraction causes the earth to move towards the sun about six inches every second. The tendency to move straight forward in the next second is still the same, but the fall towards the sun is also the same. Hence the results, the curved path shown by the dotted line. It makes a closed curve, which is nearly circular, round the sun, the Earth coming back in 365 days and a few odd hours, minutes and seconds to its exact starting-point every year.

This motion has nothing to do with the spin of the earth on its axis, which turns first the eastern and then the western half towards the sun, and produces day and night alternately; nor with two other motions which I need not mention here; each of the forces producing these motions acts quite independently one of another.

6. The Solar System as a gyroscope.

You may consider the world as a huge top, spinning on its axis so that a point on its equator is carried completely round the 24,000 miles of its circumference in one day—i.e. with a speed

of about 17 miles per minute, while at the same time moving bodily round the sun at the far higher speed of 19 miles per second, and accomplishing the journey round the sun, 93,000,000 miles away, in one year.

All the other planets do the like, with various speeds and at various distances, and they keep station by the accurate balance of the forces which have produced and maintain their motion.

You have perhaps seen a kind of heavy top which is called a gyroscope and have wondered at the extraordinary positions it can keep while in motion. If you have not, save up your money and buy a good one. It will cost you about £1 ; it is a most interesting toy which will show you how very rapid spinning tends to keep the gyroscope in whatever position it was started. Gyroscopes are used to keep under-water torpedoes straight on their set courses, and if you set a gyroscope spinning and consider carefully what you will see, you will get more ideas of the action of forces than pages of explanation can give you.

Well, the Solar System is like a large and rather complicated gyroscope ; only instead of there being only one top there are eight, with attendant moons, and these eight are moving in rings round the sun. But the steadiness of the whole system is due to the same principle as the gyroscope—the rapid motion of heavy masses, which, under the First Law of Motion, maintain their motion unchanged century after century for ever, as long as no fresh force acts upon them. If there is any friction in the space in which they

move, their speed will slacken, and if it slackens they must move in a spiral which will at last end in the sun. This is absolutely certain.

And it is to be noticed that although the masses are so vast and the distances so immense, the driving forces are those which act on each particle, nay, on each atom, and are inconceivably minute. It is quite certain that this huge effect is a total sum of very small ones, for if the atoms had no weight the whole planets could have none. Here, again, while man can apply force only on the outside of things acted upon, the Creative Power applies it from the inside, and the enormous forces which drive the planets on their courses are the total resultants of the tiniest pulls on the atoms of which they are composed, just as the whole sea is made up of particles of water much too small to be visible to our eyes.

7. All the planets made of the same elements.

Now all these worlds are made of the same stuffs as our world, and therefore are subject to the same laws, and we may safely assume that the life in them must be essentially of the same sort as our life—that trees are green and not blue, and that the same light and warmth produce the same results as they do here, though there are many things in the outer planets which we have not, such as the Rings of Saturn and Jupiter's eight moons.

Now you may ask, how do we know for sure that the other worlds are made of the same stuffs as our world?

For me to give you a satisfactory answer you ought to know at least the first principles of Chemistry and Physics; but I think it can be made fairly clear to you in a few pages.

There are about fifteen non-metallic elements. The commoner ones are hydrogen, oxygen, nitrogen, chlorine, and a few other gases; carbon, sulphur, phosphorus, iodine, and a few other solids. There are also the metals, of which the commonest are iron, tin, lead, zinc, copper, silver, gold, mercury, calcium, sodium, potassium, magnesium, and about fifty more whose names I need not trouble you with. All these are "elements." These atoms of different kinds are, as I have already explained, the bricks out of which all the things you can see or weigh are built. They are probably of different sizes, and are certainly of different weights. They have the power of combining one with another, and the compounds so formed have properties quite different from those of the elements which combined together.

Thus an atom of oxygen, weighing 16 units, combines with two atoms of hydrogen, weighing 2 units, to form a particle of water weighing 18 units.

One atom of the yellow gas called chlorine, weighing $35\frac{1}{2}$ units, combines with 1 atom of the white-metal sodium, weighing 23 units, to make a particle of table salt weighing $58\frac{1}{2}$ units.

You will notice that no weight is lost when atoms combine. We cannot tell beforehand which atoms will combine with which—it seems an affair

of preferences, to be discovered by experiment—but we can classify our atoms so that we can understand quite systematically how they act towards one another.

Oxygen atoms will combine with nearly all the other atoms to form a class of substances called "oxides"; e.g. three atoms of oxygen and one of sulphur form an oxide of sulphur or sulphuric oxide—silky-looking grey crystals. One atom of oxygen (O) [1] combined with one of sodium makes sodium oxide—a white powder. One atom of oxygen, and one of the white-metal calcium makes a particle of calcium oxide, or lime. One atom of oxygen and one of carbon makes carbonic oxide—an invisible and poisonous gas. The oxides of sulphur, carbon, and the other non-metallic elements when further combined with hydrogen or water form a set of sour-tasting stuffs called "acids." The oxides of the metals when combined with hydrogen or water form a set of soapy-tasting substances called "bases" or "hydrates."

When an acid and a base are mixed together the atoms in them regroup themselves into water and a crystalline substance called a "salt," and salts take the names of the acids and bases from which they are derived. For instance, if we put sulphuric acid and sodium hydrate together, we shall get sodium sulphate and water; sulphuric acid and calcium hydrate will give calcium sulphate and water; sulphuric acid and iron hydrate will

[1] The symbols stand for atoms: O means one atom of oxygen gas; S, one atom of solid sulphur; Ca, one atom of metallic calcium; H_2 means two atoms, and so on. It is quite easy.

give iron sulphate and water ; and so on. So the name of a salt will always tell us the names of the acid and base from which it came, and *vice versa*. These transformations, which come about by the atoms changing partners, are written as chemical " equations "—e.g:—

Sulphuric Acid.		Calcium Hydrate.		Calcium Sulphate.		Water.
$H_2O(SO_3)$	+	$CaO(H_2O)$	=	$CaO(SO_3)$	+	$2(H_2O)$

where H_2 stands for two atoms of hydrogen, O_3 for three atoms of oxygen, S for one atom of sulphur, and Ca for one atom of calcium, a metal not unlike silver.

So do chlorine atoms combine to form chlorides, bromine atoms to form bromides, and so on

There is no need to trouble you with many of these names, but the system on which they are formed is very simple : any name ending in " ide " means that the stuffs consist of two elements only—iron oxide means iron and oxygen, (rust) ; calcium oxide means calcium and oxygen, (lime) ; sodium chloride means sodium and chlorine, (common salt), and so on.

The salts whose names end in " ate " mean that they have been formed from an acid like sulphuric acid and a metallic base ; iron sulphate consists of iron oxide and sulphuric acid (FeO) (SO_3) ; sodium carbonate (washing soda) consists of sodium oxide and carbonic acid (NaO) (CO_2) ; calcium phosphate (bone) consists of calcium oxide and phosphoric acid (CaO) (PO_3) ; bone cells are made of this chiefly.

These and many other compounds form other

compounds among themselves, and it would puzzle you too much to try to trace these now or to form ideas about them ; it will be sufficient to say that these elements, and their oxides, chlorides, sulphates, carbonates, etc., and the compounds of these, are the raw materials of all that we can see, touch, or taste—the air, water, stones, all minerals and all salts ; and that they are also the raw material out of which the Creative Power builds living cells.

And wherever the elements are found we may be quite sure that oxygen has all the properties of oxygen as we know it, carbon all the properties of carbon, and so with all the elements.

8. Proof that these exist in other planets.

We can now proceed to answer the question, How do we know that other worlds are like our own and are formed of the same materials?

By a very curious but quite certain means. You have often seen that when a ray of sunlight falls upon a prism of glass it is split up into rainbow-coloured lights. This is because the white ray is really made up of all the colours you see. The colours of slower vibration (red, orange, and yellow) are bent, on entering the glass, more than those of faster vibration—green, blue, and violet. The light so split up is called a "spectrum." You can colour the little squares in the sketch according to the lettering, and you will see just what is meant.

Now if we split sunlight up into a long spectrum, we shall find that it is crossed by a number of very

fine, dark lines. These have quite fixed places—that is, their distances are the same.

Whenever and wherever the sunlight is so analysed these lines are always found: there are two in the middle of the yellow, three at the edge of the red, and so on.

If we treat the light from an electric lamp in

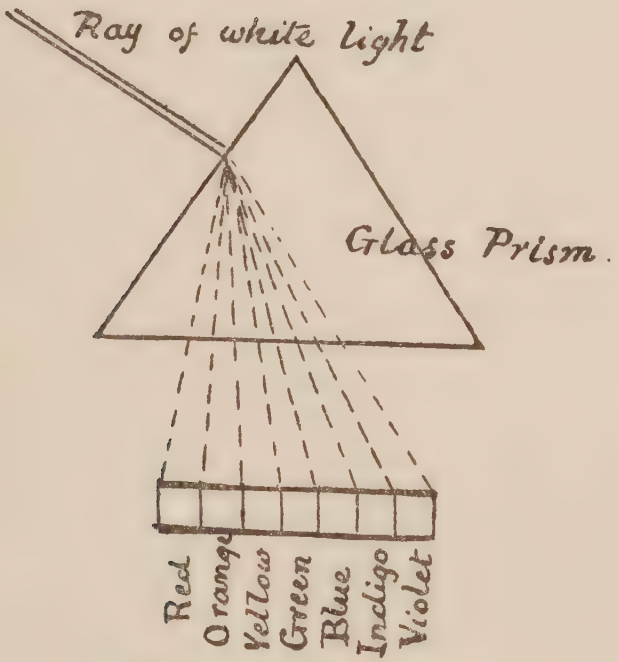


FIG 6. ANALYSIS OF LIGHT.

the same way, we shall find no dark lines at all in its spectrum.

There is, therefore, some difference between sunlight and other light.

Let us see what this is.

If we heat a little soda in the flame of a spirit lamp, and examine the spectrum of light so produced, we shall see two *bright* yellow lines in

the exact place where the two dark lines are cut out of the spectrum of sunlight.

If we now pass the light of the electric lamp, which has no dark lines, through the flame in which the sodium is burning, we shall find that its spectrum now shows the two *dark* lines in exactly the same place as in the sun's spectrum.

So by this and many other experiments we know that wherever we see the two bright lines, the source of the light must be a glowing gas containing sodium, and wherever we see the dark lines we know that there is vapour containing sodium between us and the source of the light.

Every one of our elements has its characteristic bright lines. All the corresponding dark lines are found in the spectrum of sunlight ; and as laws are invariable, we can be quite sure that these elements all exist in the atmosphere of the sun. But if they exist in the sun they must have the same properties as they have here.

By this means we can analyse also the light from separate stars, and we find always the same elements with which we are acquainted here, together with (sometimes) a few new ones not yet discovered upon the earth, or old ones that have changed in the course of millions of years.

Now, it must be quite clear to you that as other worlds have the same elements, these elements must have the same properties, and under the same conditions they must form the same compounds as they do here, and as these compounds are the raw material of all vegetable and animal life those worlds must be under the same laws as our own.

There may be differences due to the presence of other elements, and there certainly are differences due to any of them being colder or hotter than our world, but in the main they are like.

That is, they are all formed on the one general plan, however different their details may be.

Of course all that has been said is not one-hundredth part of all that there is to prove the conclusion we have just arrived at. There are whole sciences which have not been mentioned, and of those that have been mentioned only the merest outline has been given.

9. Infinite variety, but one purpose.

All our sciences are but the beginnings of our discoveries of the working of one Mind which makes all the laws of Matter and Force. But enough has been said to show something of the order which prevails in this wonderful world, and to open your eyes to a few of its mysteries. If you have grasped the fact that wherever atoms are grouped in regular order to form crystals or cells, and wherever those cells are grouped in regular order to form living creatures, in those same places must be Intelligence to produce that order, you will have begun to understand what is meant by the Presence of GOD in the Universe from the remotest star to each cell in your own body—the same elements, the same order, the same laws, the same purposes. The same law of gravity moulds the dewdrop on a cabbage leaf as gives its orbit to a planet; the same chemical laws act in the solar storms which send up fountains of

glowing hydrogen, 100,000 miles high, as in the breath you draw into your lungs ; the same laws of light govern the rays sent out by stars millions and millions of miles away as determine the little image formed at the back of your eyes, whereby you see.

The same Creative Power is everywhere, internal to every atom and every cell, and again we can perceive how true are the words of the Psalmist, written long before Science had revealed the clue to them :—

> "The heavens declare the glory of GOD, and the firmament showeth His handiwork. One day foretelleth another : and one night certifieth another. There is neither speech nor language, yet their voices are heard among them. Their sound is gone out into all lands, and their words into the ends of the world."

Everywhere boundless Power, boundless Intelligence. Minuteness which far transcends the power of our microscopes to show is no difficulty to the perfection of its workmanship ; distances that our minds fail in trying to imagine are no obstacle. To that Intelligence Space and Time are as if they were not ; a thousand years are as one day. From everlasting to everlasting that Intelligence and Power act, and worlds arise and fade, and "as a vesture they are changed, but Thou art the same, and Thy years shall not fail."

PART II

HOW ?

CHAPTER III

THE HISTORY OF THE EARTH

There rolls the deep where grew the tree.
O Earth, what changes hast thou seen!
There where the long street roars hath been
The stillness of the central sea.

1. "Making" and "creating."

IT is quite natural that men, seeing the purposes which are served by every organ of the body and by every kind of plant, by the laws of gravity and by the action of Heat and Light, and perceiving that all these continue from day to day and year to year and century to century, should have imagined that GOD made all things by a command just as we now see them and started them on their way, as a clockmaker makes a watch and sets it going.

But we cannot, by any process of guessing what GOD may be like, form any true notion about the vast Mind that makes all things, but only by observing how the Creator actually does work. Otherwise our guesses are scarcely more likely to be true than that of a little boy who saw a second clergyman come into the church on Sunday where he had been used to see only

one. Impressed by the new minister's stately presence and red silk hood, he pulled at his mother's dress and asked in an excited whisper: "Mother! Mother! Is that GOD?" And still some grown-ups talk about GOD as though He were some kind of vast invisible man looking down from the sky. It is quite natural to speak of GOD in that way; and as long as we know that it is only a way of speaking, just as we may speak of a father "feeding his children" even though he be far away over seas, it is not untrue. More than that, we speak of the "fury" of the storm, the "gentleness" of the breeze; and these words, though not literally true, convey true ideas. So when the Psalmist speaks of the works of GOD'S "hands," or calls to Him to open His eyes or His ears, it will be most foolish vanity on our part if we imagine that David thought of GOD as having human eyes and ears and that we know better. GOD does "see." "He that made the eye shall He not see? He that made the ear shall He not hear?" But we cannot realize exactly how, though the wireless telegraphy and X-rays may help us with a notion. And it is important that we should understand that we really and truly stand in His sight and in His presence.

At first men thought that their guesses were literally true. You have read in the last chapter how the Babylonians and the Jews imagined the earth to be a flat, circular plain with sun, moon, and stars rising and setting round it. They thought they could actually see this. Then the Greeks, who had real mathematical knowledge,

found out that it is a ball, or sphere, though they still thought it to be in the middle of the Universe, and imagined the sky to be a kind of transparent shell, above which Father Zeus sat enthroned, and whence he occasionally descended to earth. Till quite lately people thought that GOD made the seas and continents and islands six thousand years ago just as we see them to-day. There are still a few people who keep to this guess, and think it must be true because the Jews thought it so.

All these notions, however, were just human fancies, and when men began to observe little things instead of guessing at great ones, they perceived that GOD *works from the inside of things, not from their outside; and when they observed yet more closely they saw that* GOD *works in and by infinitesimally small things—the atoms and cells.* Every intelligent person must be inclined to ask the question: If the Mind that is so much greater and wiser than our minds did not make the world all complete and set it going on its way, HOW did it come to be as we see it?

This chapter will give you an outline of the answer to this question. Only the merest outline, for that is as much as you are yet able to understand. And before I begin to draw this outline for you I wish to repeat once more the difference between "making" and "creating." To "*make*" *a thing is to fashion it out of wood or metal or clay or other raw material with the aid of hands and tools, or by fire and water, or by some other external means.* TO "CREATE" IS TO CAUSE IT TO MAKE ITSELF BY INTERNAL FORCES. GOD

creates the flowers and the leaves. We say quite naturally and rightly that "they grow." So they do, but they cannot arrange their own cells into forms and colours. Only Intelligence can do that—and this Intelligence is operating inside the unconscious flower. To a limited extent man can create also: when a gardener develops a wild rose into a garden rose he is, in a sense, creating a new flower. But the gardener did not give the wild rose the power of changing its form, nor did he make the laws under which it does so. This is what the real Creator does. Broadly speaking, we can truly say that GOD creates and man "makes," and if we would see the steps by which the world came to be what it is we must study the records of its past—the steps by which it came to its present form.

The plants and animals that inhabit it now are very widely different from those which once lived on it. Even in recent times whole tribes and races of men have disappeared. We know from the sculptures of ancient Egypt, made some six thousand years ago, that the "Bushmen," now living in a remote corner of Africa, were then a numerous race. The Pygmies have mostly disappeared, and are found only in Central Africa and New Guinea. The North American Indians and South Sea Islanders are disappearing. The natives of Tasmania, a numerous people two hundred years ago, are quite extinct. Each of these races is perishing or has perished before a stronger and more competent race, not necessarily by violence nor by disease, though Europeans have

a black and evil record in both respects, but by a kind of discouragement, fewer and fewer children being born in each generation.

But it is not only, nor chiefly, among human beings that such changes have taken place. The animals whose fossilized remains are found in the rocks were vastly different from those that are living now ; and it is very remarkable that they all show much ruder, uglier, and coarser forms than those of the same families which now exist. The mammoth was a coarser, uglier elephant ; flying reptiles preceded true birds. Almost the only exception is the Irish elk, which would seem to have been as graceful as any existing stag. By examining the fossil forms we can trace the steps by which existing animals have come to be what they are.

2. How the earth began.

When astronomers turn a telescope to the starry sky they see here and there what looks like a tiny patch of shining fog. This is called a "nebula," which means "a little cloud." The light from these when examined by the spectroscope, which you will remember reading about on page 65, reveals a surprising thing ; instead of a band of coloured light, we see in most cases the bright lines which reveal the presence of most of our elements in the state of glowing gas. Of the other nebulæ, whose spectra are different from this, I need not speak here ; in what follows you will understand that I am speaking only of those whose spectra show bright lines. Though so enor-

mously far away, we know for certain that these consist of glowing gas, for the natural laws are the same in all parts of the Universe. Before this was discovered, a great French astronomer named La Place reasoned out that our solar system *must* once have been just such a " nebula " which had whirling motions set up within it. That such whirls are very easily set up in a mass of fluid which is very nearly still, you can try for yourself. Fill a lavatory basin which has a plug in it : leave the water to get quite still, then pull up the plug. Unless the plug is very large, the water as it sinks is nearly sure to acquire a rapid, whirling motion. La Place calculated that just such a whirl *must* be set up in the nebula that would exist if the whole mass of the sun and the planets had once been so hot as to be in the state of vapour. Such a mass of vapour or of small particles would fill the whole of the enormous space now occupied by the solar system. It has been shown mathematically, and therefore quite certainly, that as soon as any part began to solidify a whirl must be set up, and as the process went on rings and then spheres would form round the central mass.

Then more powerful telescopes showed the whole process actually going on in some of these nebulæ, as you may see in the photograph of the nebula in the constellation Andromeda.

It is therefore certain that our sun and planets, the Earth, of course, among them, began as a glowing mass of gas indescribably hot, whirling about its centre ; and that, as it cooled, first one

Arrows indicate direction of motion. A, central sun; B, C, D, planets still white-hot; D . D, gaseous matter rotating in rings round A.

planet and then another was formed ; and that, in accordance with the First Law of Motion, each went on spinning on its axis, and travelling in its orbit round that part of the nebula which had condensed into a central sun, just in the same way that it did while it was still fluid. For it is to be remarked that all the planets and the sun spin in the same direction—west to east—also that the planets move round the sun in the same direction, and nearly in the same plane, so that the whole system spins in much the same way as the different planets, only that different parts of it have different speeds.

Now let us see what would take place under the laws of chemistry, gravity, and mechanics in a planet as it began to cool, such a planet as you see in the Andromeda nebula. First of all the different chemical elements—hydrogen, calcium, oxygen, nitrogen, carbon, iron, and the other elements—would come into existence. As each was generated it would combine with other elements according to its affinities at the existing temperature. The affinities of the elements differ at different temperatures : when very cold they will not combine at all ; when very hot they even separate. Hydrogen and oxygen when glowing white hot would not combine, but as soon as they cooled down they would unite to form the masses of water which we now see as oceans and rivers and lakes. So in the same way other elements would unite, and thus would be formed the material for the great masses of limestone rock (which is calcium carbonate), the calcium, oxygen, and

carbon uniting together. Similarly all the other primitive rocks would be formed. Still, all would be in the fluid state, and the action of gravity would mould the whole fluid mass into a ball, and its spin would cause it to flatten at the poles and bulge at the equator—which is precisely the form of the Earth.

But the whole of the oceans would still be suspended in the air as vast clouds of steam. This is probably the state in which the great planet Jupiter now is. The body of the planet is rarely seen, being hidden by cloudy masses in his atmosphere.

As the Earth continued to cool these clouds would rise into the higher, colder air and would fall in vast cataracts of rain upon the hot ground, still further cooling it until the temperature would be sufficiently lowered to allow of the seas existing as water in the lowest parts of the now solid land. The regular process of evaporation by the sun's rays would begin, the rain on the land would make rivers, and the changes which we now observe around us would commence.

That process I shall try to explain as simply as possible.

3. Formation of mountains and high land.

If you look at an apple which has been stored through the winter, you will generally see that its skin is full of wrinkles. This is because the inner parts have shrunk more than the skin. Now, this is just what happens to the earth, only that the apple shrinks by reason of its moisture drying up, whereas the earth shrinks because hot stuffs con-

tract, or get a little smaller, as they cool. And if you refer back to page 50, and think a moment, you will see that in proportion to the diameter of the apple, the wrinkles on its skin are much larger than any mountain on the earth in proportion to the diameter of the globe.

As the whole mass of the earth shrinks a little in cooling, its crust or skin is thrown into "crinkles," very small in comparison to the diameter, though large to our sight. These crinkles make the high lands at their tops and the valleys at the lower parts. These crinkles were originally rounded, but were worn by rain, snow, and wind into their present forms. It is quite easy to see how this came about. On any fairly level piece of ground, dig up a heap of soil and pat it with the spade into a rounded hill about three feet high. If you do this in October, and watch the effect of the winter rains upon it, you will find that by the following March it is worn into a model of a mountain. There will be peaks where the soil is harder, valleys where it is softer, ravines down which the water runs, and the stuff carried down from the hill will have spread out at its foot into a sloping plain.

The same thing goes on in Nature on the great scale. In the early ages of the earth this process, that is going on around us, would be much more violent ; torrential rains from the warm seas would cut the great valleys we see in the Alps or any other great mountain ranges. The process now goes on more slowly. Year by year the stuff is washed down from the hills and great plains are

formed at their base. So it happens in many places that the land extends seaward. At Rye and Dungeness you may see these changes going on before your eyes. Only four hundred years ago Rye was a seaport and a harbour ; now it is two miles from the seashore. And if you take a walk to the lighthouse at Dungeness you will see that this lighthouse is built on a mass of shingle swept up by the tide. Walking inland towards Rye you will see, here and there on the bare shingle, patches of grass and gorse. A little farther on these patches are closer and touch one another ; dust has collected in them and a little soil is visible. Farther still the soil has become continuous, and short grass and other plants are growing in it. Near Rye this soil is two and three feet thick, but on digging through it we come upon the same shingle as that at the lighthouse.

4. Formation of river "deltas."

The way above described is one manner in which plains are formed. There is also another, by which they grow at the mouths of rivers. After a heavy shower you may see in any steep country lane or hillside a rush of muddy water, and if you follow such a stream downwards, you will find that when its speed slackens it deposits the silt in a fan-shaped mass, over which the water passes in little streamlets which shift their courses continually. Look, now, at the map of Egypt, of the mouth of the Ganges, or of almost any great river, and you will see a piece of land of very nearly the same shape as the triangular piece of dirt

where the brook deposits the mud it can no longer carry along. If you reflect that many hundred thousand tons of silt are brought down by these great rivers, year after year and century after century, you will see how natural it is that towns and villages once built on the coast are now five, seven, or more, miles inland. The river Indus in flood-time carries about half an ounce of mud in each cubic foot of water. About 100,000 cubic feet of water pass *per second*. You can easily work out how many tons are brought down in each three months' flood. And a thousand years are a short time in the growth of a delta.

Land also grows under the sea.

If you take some chalk from our English cliffs, dissolve a little carefully in water, and place this under a good microscope, you will see that the white mud consists mainly of tiny sea-shells. At the bottom of the Atlantic Ocean to-day just such white mud is growing year by year, by the dropping down upon it of the little creatures which live and die in the water above. This "Atlantic ooze" is found to grow at the rate of about an inch in a century. From these facts it is pretty certain that our chalk cliffs were once a sea-floor. This conclusion is proved correct by many remains of fish, sea-shells, and sea creatures found imbedded in it. And such sea creatures are found, not only in the chalk but also in many other kinds of soil—in clay, limestone, and even in slate—proving that all these were formed at the bottom of the deep seas. Of course, this deposit of land took enormous periods of time. The chalk, for

instance, is often 500 feet thick ; this means 6,000 inches, and if it was deposited at the same rate as the Atlantic ooze, that would imply 600,000 years. Of course, there *may* have been conditions which caused the little creatures to grow faster then than they do to-day in the Atlantic, but there is no particular reason for astonishment that the process should be slow ; 600,000 years seem long to us, but to the Eternal Power it is like a drop in the ocean of Eternity.

But land does not grow under the sea till in time it rises above it by getting thicker and thicker ; great changes of level are brought about in other ways.

At the very top of one of the peaks in the great mountain range of the Himalayas there is a cap of chalk. That is all that is left of a great plain that was once sea-floor and then level land. People were once disposed to fancy that there must have been great earthquakes or upheavals to raise a sea-floor to the height of two or three miles above sea-level. But there is no reason why we should imagine this unless there is evidence that it was so ; what we happen to think likely has nothing to do with facts. Just as it takes hundreds of thousands of years to lay down a " stratum " of chalk or clay, so it may well take as long to raise it out of the sea into high, dry land by the formation of fresh crinkles in the progressively cooling crust of the earth. You have read how the Creative Power works in atoms and cells, and the results we see are the aggregate effect of vast numbers of very small forces continued through

great periods of time. These small forces which raise up continents and mountain chains out of the sea and sink great lands below sea-level are the result of one simple law—bodies expand when heated and contract when cooled.

Remember once more that on a 16-inch globe there is only a difference of one-fiftieth of an inch between the highest mountain top and the deepest sea. This difference, $\frac{1}{1600}$ of its diameter, would be easily produced on the surface of the little globe if it consisted, as the earth does, of a skin or crust of solid land covering the hot " lava " which is the original stuff which cooled down a few millions of years ago from being a nebula. A contraction of $\frac{1}{1600}$ of its diameter will do it all. And as most continents are much less than this height, a much smaller fraction of the diameter represents all the movement necessary to change sea-floor into table-land. This process is still going on ; the coast of South America is rising about three feet in a century and other lands are being depressed.

5. Volcanic action.

There are also great volcanic forces in play, and when the earth was hotter it may well be that these had a greater share in moulding continents than they have now. But even yet great catastrophes do occur. In the year 1883 a whole island in the Straits of Sunda disappeared under the sea. In 1902 the crops over the greater part of Martinique were destroyed by a volcanic eruption. Many persons were killed and the town

of St. Pierre was buried six feet deep in lava and ashes. In A.D. 79 three-quarters of the great mountain Vesuvius was blown into the air and torrents of lava and hot mud fell and blotted out the Roman cities of Herculaneum and Pompeii.

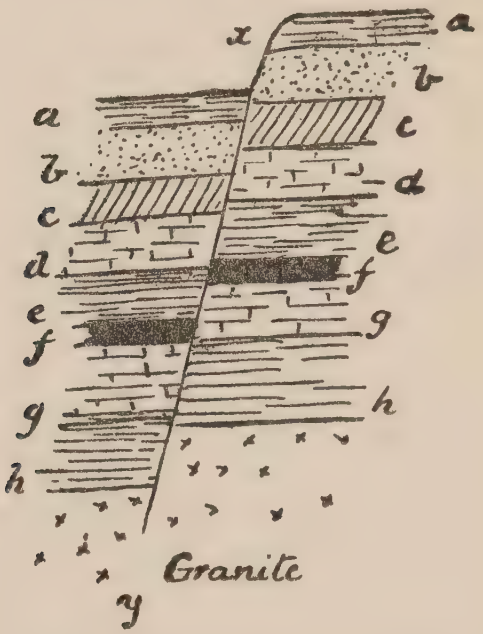


FIG. 8. DIAGRAM OF "FAULT."

a. soil.	*e.* slate.
b. sandstone.	*f.* coal.
c. limestone.	*g.* clay.
d. clay.	*h.* shale.

The strata on the right have been pushed upwards and cracked through along the line of fault *xy*.

The Roman historian Pliny tells us what he saw, and Bulwer Lytton has made Pliny's story the foundation for his novel "The Last Days of Pompeii." All these are relatively small and local events, but there have also been greater earthquakes from time to time, and there are cracks,

called "faults," made through strata hundreds of feet thick, by such volcanic forces which have moved one side of a fault up or down hundreds of feet in the way shown in the sketch.

Such faults, which are continually found by miners, show that the volcanic forces have had a great deal to do with the shaping of the world.

And you must remember that all these forces act together, not separately, and any or all of them may have caused the shapes that you may see when you are looking at a great mountain chain.

You should now have a fairly accurate idea HOW the earth was formed, and is still being formed, into its present lands and seas. And if you realize again the certain truth that where there is Order there is Intelligence, you will see in these methods whereby the ancient lava has been turned into soil fit for plant life, and the whole planet has been fitted for the diverse races of animals and men, a further proof of the action of the same Creative Power who made the hand and the eye, exerted this time over vast periods and for purposes still remote.

6. The various forms of life.

Wherever we look on the surface of the earth we find life: the fish in the waters, the birds and insects in the air, the wild creatures in the woods, and even in the skin of the ground the worms and the moles. Every kind of place, woodland and plain, mountain and marsh, the icy North and the burning plains, are all full of life.

Not only so, but our microscopes show us that millions of germs pervade the soil and the air. These have much to do with the production of garden soil and with the growth and decay of plants. Each and all are marvellously fitted to their habitats. The polar bear, who lives on seals and fish, would soon perish of cold by plunging after his prey into the Arctic seas were he not protected by a thick, close, greasy wool, covered outside again by hair, so that even when he swims in the icy water neither wet nor cold touches his skin. Birds and animals of these regions are protected by abundant down and wool, and also by a layer of fat under their skins, accumulated in the long polar summer. The seals have the same beautiful thick fur under a hairy coat, and their smooth bodies are cased in thick fat or "blubber," just under the skin.

In tropical countries the camel, which inhabits the almost waterless deserts, has a whole set of water-cells in its long neck, wherein it can store as much water as it needs to last four days ; it has broad padded feet to prevent its sinking in the loose sands ; it has a hump, which is really a reserve of fat (not spread over its body in this case, for in its tropical habitat it has no need for any such protection), but for the animal's blood to feed upon when food is scarce in the desert so that the creature's strength may not fail. In every way the camel is wonderfully fitted to the sandy, barren countries to which it belongs.

Long before our soldiers wore a uniform which would conceal them from the sight of an enemy,

the lion and the puma dressed in "khaki," matching closely the colour of the rocks and earth in the midst of which they live, to enable them to creep on their prey unseen. The tiger, whose bright black and yellow stripes make him so conspicuous in the Zoological Gardens, is scarcely to be seen among the bright blades of yellow grass and dark vertical shadows of his native jungle.

I was once tracking up a tiger which had just killed a man. Our party of six were following the tracks of the animal up a little dusty path between two small open hills. At the "saddle-back" the ground opened out into a little plain, not above half an acre in extent. It was covered with short grass and a few quite small bushes, with tufts of longer grass two to three feet high. There was nothing in which it seemed possible that so large an animal could find shelter. Keeping a sharp look-out for footprints, we spread our line over this open ground, expecting to find the track of the beast on the farther side. Not finding any, we returned, and there were the footprints of the tiger covering ours down the path up which we had come. None of the six men, all used to jungle life, had seen the great cat as it lay somewhere in the tufts of yellow grass, though one of us must have passed within 25 yards of it. And perhaps the most curious thing of all is that the creature should know that he could so hide.

Go to an aquarium and look at the fish. See how wonderfully they are fitted for the water wherein they live, how their fins move them slowly

and a flick of their tails makes them dart like an arrow in any direction. Look at the seagulls following a steamer for scraps of food. They sail round and round a vessel going at twenty knots an hour with the greatest ease ; they steer with their tails, they slip down an air-slope and glide up again with scarcely an effort. In our aeroplanes we can only strive to imitate their unconscious skill.

Look at so humble a creature as the mole. What life could seem harder than to be perpetually digging and mining through the soil in darkness? But the animal is so admirably adapted to his life that we may be sure he enjoys it. To begin with, he has, for his size, a much larger heart than any other animal. You know how your own heart thumps after any very heavy exertion ! Well, if it were twice the size, it would not do so, but you would be always wanting to take heavy exercise. This is the mole's case. He has short, strong forefeet, turned outwards and armed with sharp claws. His eyes and ears are buried in thick fur to protect them from dirt. That fur is like velvet ; it will lie smooth either way, and it is so fine that no dirt will stick to it. The mole lives on worms that he chases in his burrows and finds on the surface of the ground at night. He has a most perfect sense of smell and can guide himself in the dark by its means.

Space would fail to tell a hundredth part of the wonderful manner in which animals are fitted to their surroundings, or " environment " as it is called—meaning the whole set of circumstances

of climate, food, soil, water, friends, and enemies, in the midst of which they strive and live. It is this continual effort after food and mates which makes up the whole of an animal's life—it spends its whole time and power in this way, and becomes more and more perfect by its practice.

It was once thought that GOD created each kind of creature in one day, each exactly suited to the environment in which it was to live. But great naturalists, like the French Buffon, the Swede Lamarck, and our own Charles Darwin, and Russel Wallace, by observing and comparing many animals and their fossil forms, saw that this process of fitting the creatures for their mode of life has been going on for thousands of years, just like the formation of lands and seas. Of course, the fact that this has been going on for vast periods of time does not in the least alter the other fact that Mind is required to fit the creature to its environment, whether this is done in a day or in countless generations, by that Mind fashioning it from outside or by an inner "tendency to vary."

7. Darwin's theory.

The conclusions of Charles Darwin may be summed up in three very remarkable statements:—

1. There is a tendency to vary in all living things.

2. The variations which are helpful to any species of animals in finding food and protection from enemies persist in its descendants and become more marked, while those which

are unhelpful cause their possessor to fall an early victim to its foes.

3. Those variations also which help an animal to find mates persist and become more marked, while those which are unhelpful lead to its dying out without leaving progeny.

New species are formed in this way, by helpful variations becoming more and more marked in the descendants. These changes are very slow. Take, for instance, the elephant. The Indian and African elephants have descended from the mammoth or some other extinct form, but the shape of their heads is different, though they feed on similar food. They require great quantities of green food, so that no elephant could cross the great deserts and mountains which separate the Indian and African forests. The two varieties of elephants can therefore have had no communication since the Sahara, Egypt, and Arabia were denuded of forests—that is, since those countries had their present forms, which is certainly for many hundred thousand years. The elephants have not changed into a form which could live where vegetation is less abundant, their ancestors simply retreated where food was plentiful, and it is not clear why the form of the heads should have changed. But it has changed, and these and other variations have made the African and Indian elephants into two distinct species.

The original form of the bear has changed under the same " tendency to vary " and to adapt itself to different environments, till we have the Arctic bear, which lives on the ice and catches its

prey in the water ; the mountain " grizzly," which feeds on flesh ; the little Sumatran bear, which lives on honey and fruits and has a light fur suited to a hot climate ; and several other forms, all of which are now distinct species.

The general correctness of Darwin's propositions is universally admitted, though scientific men are now inclined to think that the " tendency to vary " plays a larger part than Darwin assigned to it, and that these variations are not entirely, perhaps not even mainly, produced by the environment, but arise in very great measure from internal causes. That is, however, only another way of stating the action of Creative Mind.

8. Insects and their habits.

The variations which no demands of the environment can account for, are most obvious in the case of insects. There are many whose ways can hardly be the result of growing gradually more fitted to their surroundings. Consider, for instance, a hive of bees. There are plenty of solitary bees that make holes in an earth bank, lay an egg in it, store up food for the grub, and find this plan quite successful. Why should not all bees live in this fashion? But they do not. The hive is a most wonderful example of ingenuity, far in excess of anything the bees need for their mere existence. The " natural " thing would seem to be that every couple of bees should make their own nest as the birds do ; but instead of this in every hive of bees there is only one mother-bee. In the winter all the bees sleep on the combs of

the last year. In the spring the "queen-bee," who is really the mother-bee, walks over the waxen comb and lays an egg in each of the little six-sided cells of which it consists. The worker bees follow her, and in each little chamber they put enough food for the grub which the egg will hatch into.

Some of these chambers they make larger than others, and into these they put a special kind of food, and thus they produce young "queens." They are therefore able to do a thing that we human beings have not yet discovered: they can produce at will young bees who are either male or female. Not only so, but by withholding this food they produce neuter or "worker" bees, that are simply undeveloped females who cannot lay eggs—and, we may presume, don't want to.

When the young "queens" are hatched they lead away a swarm of workers from the whole hive to go out and form a colony. The worker-bees cluster round the queen in a hive, and if she should be lost or killed they all of them seem to know it, and they set to work to feed up an ordinary grub into a mother-bee.

I have not space to tell you a tenth part of the wonders that every hive of bees contains. You should read Maurice Maeterlinck's "Life of the Bee," and you will see how unthinkable it is that the instinctive wisdom of the hive should have been produced by any "environment." Or read Sir John Lubbock's "Ants, Bees, and Wasps." You will find there many examples of an instinct which could not have been gradually learned.

For instance, the Sphex wasp lays one egg in a nest which she makes in an earth bank. She is a honey-eater, but her grub needs flesh meat. You remember the distinction between the nerves of movement and the nerves of sensation. Well, the Sphex would seem to have discovered these ages before man did, for she selects caterpillars suitable for the food of the grub her egg will hatch into, and stings them in the exact place which will paralyse the nerves of motion, leaving the others intact. By this means the caterpillar cannot crawl away, but remains in the nest as live meat to feed the grub. The sting must be put into the exact place—ever so little to the right or left, higher or lower will not do. The Sphex, however, makes no mistake. But so little is this the action of what may be called her "own" intelligence that if her grub be taken out of the nest and laid at its entrance she does not try to put it back nor even know that it has been removed.

So also with birds. The little platform of twigs which suffices to the wood-pigeon for a nest on which to hatch her plain white eggs, with perhaps a little hay or moss to make a softer bed, is clearly all that is *necessary* for any bird. But look at the nests of the chaffinch or the long-tailed tit, of the weaver-bird and the tailor-bird. Consider that each generation of these birds make their wonderful nests *at the first trial* just as perfectly as their parents who have made them several times. You were born and brought up in a house! Could you even begin to build a house? The birds can. Look, too, at the colours of their

eggs and at their own colours. Their bright plumage is not necessary to their existence—the dowdily dressed sparrow gets along quite as well as the brightly dressed goldfinch. It is true that plumage keeps birds from mating with strange species *once those species have been formed*, but it is not at all clear why the colours should have arisen to make the species, unless the Creative Mind had so designed.

How should the gnat, which lives in the air, know to make a little boat of her eggs and float them on the water, which is the habitat of her young ones, but by the action of the same Creative Mind which made all her organs and prepared her life? The young gnats hatch and fall into the water, where they grow into those curious little wriggling creatures that you may see in any water-butt or stagnant pool.

The butterfly has never seen her young ones. She came out of a chrysalis. But when the time comes for her to mate and lay her eggs, she knows enough about plants to place her eggs only on those plants which alone are suited for the food of the caterpillars those eggs hatch into, and this she does with such certainty that the white butterflies are called Brassicæ (Lat., *brassica*=cabbage) because she always lays on that kind of plant. So also the peacock, red admiral, and tortoiseshell butterflies are called Urticæ (Lat., *urtica*= a nettle) because they lay on these plants only. It is not that they lay their eggs anywhere and that those only laid on the suitable plants survive. The butterfly chooses the plants. How does she

do so? By the operation of a mind in her, quite unconsciously to herself.

9. Operation of the all-present Mind.

This is not a guess nor a hypothesis ; it is a fact, like Newton's statement of gravity—that every particle in the sun pulls every pebble on the beach. Granted that where there is motion there is Force to produce that motion, and where there is order there is Intelligence to direct that Force, it follows that " instinct " is just the operation of omnipresent Mind.

Under these conditions not only is every animal guided to those actions which will secure for it food, protection, and mates, and enable it to bring up its young, but as the slowest, weakest, and less fit individuals fall victims to their enemies before reaching maturity, there is a general tendency to improvement of each race. The improvement is generally so slight as not to be noticeable unless we contrast fossil forms with those at present existing ; but no one can compare the fossil three-toed " hipparion "—the remote ancestor of the horse—with the modern wild horse of the same country (the South American pampas) without seeing the great superiority of the latter in size, strength, and speed. And if we compare the dodo, which became extinct in Madagascar only after the Dutch settlement in the sixteenth century, with other birds, we cannot fail to be impressed with the greater beauty of the present species.

And going still farther back, the huge reptiles

of the Lias Age were succeeded by much more beautiful and perfect forms, and our present wild animals are much more beautiful than those whose fossil remains show them to have been their ancestors. So that the improvement is a gradual process and is continually going on. There are a few exceptions to this general advance. In quite ancient strata there is found a pretty little sea-shell called a Terebratula. These very same shells are still found in Australian seas. Through hundreds of thousands of years the Terebratula has persisted unchanged, as if the design were unimprovable, as it probably is.

For each species there seems to be an underlying primitive type, separating it off from all other species. For instance, the blue rock-dove is the typical pigeon, and when man, by careful selection and breeding, has produced the types known as fantails, pouters, carrier-pigeons, and others, if all these are allowed to breed freely among themselves, the fifth or sixth generation will all have returned to the type—they will all be common blue pigeons.

So the greyhound, bulldog, terrier, and other varieties of dogs have been produced by careful selection and breeding from those dogs which begin to show the qualities which the breeder desires to get. But if they are allowed to cross-breed anyhow, the resultant puppies are, first of all, " mongrels "—of no particular breed—and then in a very few generations all will become the lanky, yellow-haired dog from which all were originally descended—they will have " reverted to type " and returned to the form distinctive of the

species. This is really quite natural. For as each individual has two parents, four grandparents, eight great-grandparents, and so on, its inherited qualities must be represented by the series—

$$\tfrac{1}{2} + \tfrac{1}{4} + \tfrac{1}{8} + \tfrac{1}{16} + \tfrac{1}{32} + \ldots.$$

If now two creatures mate whose more recently acquired qualities cancel one another, then those qualities which are represented by the long series of fractions after the first will predominate and produce the ancestral effect. You will have to think a bit about this if you want to understand it.

From all this you will see that there is clearly a process of progressive improvement of types, and a great change from earlier conditions. This process is called Evolution, which means "unfolding" of something hidden in the nature of things. It is also sometimes called "the survival of the fittest," because those animals which are best fitted to the conditions in which they live, escape their enemies, reach maturity, and leave offspring. Wild creatures live in a state of war, and the death of the unfit is the means of the improvement of the race.

The truth seems to be that every species arose from variations due to Creative Mind acting in matter: the variations that were helpful in finding food and mates helped those individuals to survive and leave progeny; once a species was formed, the same unconscious Mind caused its members to mate only with their own species, and of the young so born only the best and fittest come to maturity and continue the race.

CHAPTER IV

HUMAN EVOLUTION

Life is real, life is earnest,
And the grave is not its goal:
"Dust thou art, to dust returnest,"
Was not spoken of the soul.

LONGFELLOW.

THIS will be a difficult chapter for you. There are many things which cannot be very simply told. But if you read it thoughtfully I think you will find it very interesting, for it tells you much about your own destiny.

I.

THE GOAL OF HUMAN EVOLUTION IS THE DEVELOPMENT OF THE SOUL.

1. Early man.

As rain finds its way down into the earth through the cracks and fissures of limestone rocks it dissolves a little of the carbonate of lime of which they are composed. If as it filters down it comes to a cave, it hangs on the roof in drops. As these evaporate they leave a little deposit of carbonate of lime in the spot where the drop

rested. The next drop leaves a little more, and in this way a " stalactite " of chalky texture, looking like an icicle, is built up. The water which drips upon the floor of the cave also deposits its carbonate of lime, and in course of time covers the floor of the cave with a thick layer of " stalagmite." This is the same stuff as the stalactite, the one name being given to the icicle-like forms that hang from the roof and the other to the slab which covers the floor.

The rate of increase of the stalagmite can be observed, and it is found that to produce an inch of stalagmite takes about a hundred years.

Now in some caves human tools and cooked bones of animals are found under many inches of stalagmite. Sometimes under these is found a second layer of stalagmite, and under this again more bones and flaked flints.

It is clear from this that many centuries, or even thousands of years, ago these caves were inhabited by men ; and from the bones there found—of the cave-bear, the hyena, the sabre-toothed tiger, and the woolly rhinoceros—we see that these cave-men must have lived at the time when these animals were abundant in Europe. That is, man has been upon the earth for many thousand years.

Some of the skulls of these cave-men are rather inferior to the skulls of the present day, but they are distinctively human in form, and there are many proofs that these men must have made considerable progress ; they could use tools and fire, they had invented the bow and the spear, and

their flint arrow-heads are often specimens of most skilful workmanship. In the caves have been found also drawings of the horse, mammoth, and reindeer, sometimes executed with much artistic skill. Try to chip a flint into an arrow-head if you doubt their skill.

Coming to times more recent, but still long prehistoric, we find all over Europe the remains of villages built on wooden piles at the edge of lakes. The year 1854 was an exceptionally dry summer in Switzerland and the level of the lakes sank eight or ten feet, uncovering a great deal of the foreshore. Stumps of wooden piles which had been set upright and kept in place by heaps of stones were found, and among them many remains of the houses once built upon them and many relics which give us hints how the people who built these villages lived. Sunk in the mud near the stump, stone axes, hammers, knives, spear-heads, and arrow-heads were found, together with hand-mills, fish-hooks, basket-work, bones, and pottery. Over two hundred of these villages were traced in the Swiss lakes. and afterwards in many parts of Europe as far as Ireland. In most of these stone weapons and implements are the rule ; but in some bronze has replaced stone, and in one case iron weapons were discovered. This fixes their antiquity : the lake-dwellers belonged to the Stone and Bronze Ages and disappeared at the beginning of the Iron Age. Some of the skulls of these people have been found, and the remarkable fact about them is that they do not differ in any important particulars from yours or mine.

It would seem, therefore, that if human beings were developed from an animal form their improvement was very much more rapid than that of the animals.

Man was not created perfect—very far from it ; his first forms may possibly have been not very much above the brutes in appearance, but he could learn, and each succeeding generation must have improved on the last, for we find the first rough flint spear-heads and axes soon succeeded by beautifully chipped knives and arrow-heads, and these again by hatchets of polished stone as well designed in shape and finish as any we could make now with all the means at our disposal.

Afterwards men discovered how to smelt copper and tin ores, and they made bronze weapons, ornaments, and armour. This also requires great skill, for it is only in certain proportions that bronze is harder than either copper or tin, and much careful experiment must have gone to the discovery of the right amount of each metal in the mixture that is called bronze. In some countries it is possible to tell pretty accurately how long ago these Bronze Age men lived there. In Egypt, for instance, the yearly overflow of the Nile leaves a deposit of mud about one-tenth of an inch thick each year. Fifty feet down in this soil bronze weapons have been found. That is to say, $50 \times 12 \times 10$ annual inundations must have occurred since these implements were buried or lost, corresponding to about six thousand years. Now we know, from the pyramids and from

other sources, that six thousand years ago Egypt was in the full tide of civilization. They had already quarried stone as well as we can to-day ; they had built beautiful temples and adorned them with statues wrought from the hard black stones which we call diorite and basalt. These stones are so hard that even with the best steel tools they are difficult to shape. Therefore the bronze chisels used must have been of a hardness and temper of which we have lost the secret. They were skilful engineers, irrigating their country by canals and moving great weights as easily as we do, though there is no record to show how they did this. Thanks to the nearly rainless climate of Egypt, their sculptures and paintings have come down to us, and show how very much mistaken we shall be if we imagine these men of the Bronze Age to have been savages. It is clear, too, that they must have built ships and traded widely, for neither copper nor tin is found in Egypt nor ever could have been. Most important of all, they could read and write ; and this, which we take so much for granted that we forget how wonderful it is that a mark of a particular shape should stand for a certain sound, is the point of departure for all sciences.

2. Man soon reached a full bodily development.

But while the improvement of the human race from the cave-men (whose skulls are of the " Neanderthal," " Cro-Magnan," and " Piltdown " types) up to those of the later Stone and Bronze Ages is manifest, it is equally remarkable that there

has been no corresponding improvement since. Professor F. G. Parsons, speaking on the Prehistoric British Man at the Medical Congress in 1913, showed that the contours of the later prehistoric skulls were almost identical with those of mediæval Englishmen of the fourteenth and fifteenth centuries exhumed from the churchyard and placed in the crypt of Rothwell Church. Improvement seems to have been both steady and rapid, compared with animal evolution, and then to have ceased altogether. Certainly, for instance, we are not nearly so beautiful in form as the Greeks of 2,500 years ago.

The general view we have taken of the world in Chapter III shows that not only is there most wonderful adaptation of every species of animal to its environment, but that every possible kind of place, whether on earth, sea, or river, the frozen North or the burning plains, has the kind of life suited to the conditions. There are practically no parts of the earth devoid of life and each shows widely differing types. Man, on the other hand, though found all over the world, is very much the same ; he differs only in the colour of his skin and by certain constitutional peculiarities. His bodily development does not alter to suit his surroundings ; on the contrary, he invents tools and makes his surroundings to fit his needs. Desiring to move heavy weights, he does not develop giant muscles ; he invents the lever and the wheel. Needing protection from the cold, he does not grow fur ; he invents the loom, spins thread, and weaves it into cloth. Desiring increased power of sight,

he does not develop keener eyes ; he invents the telescope and microscope.[1]

It is obvious that while EFFORT is still the condition of his progress, the effort is of quite a new kind ; his progress is by the evolution of MIND. The very name "man" comes from the same root as the Latin "*mens*" and the English "mind."[2] It is only by the development of our minds that we are distinctively human. It is the unseen part of us that is "the Image of GOD."

3. Proof of the existence of the soul.

But there is a deep-hidden meaning in the words—

> "And GOD created man in His own image, in the image of GOD created He him, male and female created He them. And GOD blessed them and said unto them, Be fruitful and multiply, and replenish the earth and subdue it."

Man is indeed made in the image of GOD: the material senses—our eyes and ears—are the images of far higher powers of seeing and hearing ; our knowledge is the image of a far higher Wisdom ; our Will is the image of an infinitely greater Will. Not, of course, that our outward form resembles GOD, but that we have in some degree the powers of Spirit—the power of directing external Nature, the power of choice between good and evil, the

[1] Huxley, "Evolution and Ethics."

[2] *Máyá mare na* man *mare, mar mar gaya sarir* ("Illusion dies ; not *mind* dies, [though] have entirely died [the] body").

power of unselfish work, and, above all, the power of loving unselfishly.

For many years I could not see that the "soul" of man meant anything more than the life which we share with animals. I do not excuse this blindness, but it has at least made me aware that boys and girls do honestly need some kind of proof that we human creatures are not mere bodies which are said to have "souls," but are really ourselves, spirits living for a while in bodies of flesh.

The first and best proof of soul is our knowledge of good and evil, and the unselfish and noble choice of the good that shines from every page of the history of the race. These are not the actions of an animal, even though in the fierceness with which an animal defends its young we may see the first beginnings of unselfish devotion. But in the animal the unconscious mind which produces that instinctive and short-lived devotion does not go on to the quiet, consistent, cool courage which is heroism. To my mind the most convincing proof of soul is the fact that there are hundreds and thousands of men and women who work all their lives for what they see to be right, facing pain, discomfort, and loneliness, putting away from them all the things they most desire rather than get them by wrong-doing, living lives of effort and self-denial for the sake of duty.

Consider the life of St. Paul: while he thought Christianity to be a mischievous delusion which must at all costs be prevented from spreading, he persecuted to the death those who followed

that Way. Convinced by the vision on the road to Damascus that JESUS was indeed arisen from the dead, the living Ruler of the world, he willingly gave up his whole life to bring his fellowmen to a perception of the same vital truth. Nothing could turn him aside. He says (2 Cor. xi. 24): "Of the Jews five times received I forty stripes save one; thrice was I beaten with rods, once was I stoned; a night and a day have I been in the deep; in journeyings often, in perils of rivers, in perils of robbers, in perils from my countrymen, in perils from the Gentiles, in perils in the city, in perils in the wilderness, in perils in the sea, in perils among false brethren: in labour and travail, in watchings often, in hunger and thirst, in fastings often, in cold and nakedness." Why did he so endure? Only by the instinct of right in the indomitable soul. What did his work end in? Death at the hands of the executioner as far as we know. What did he leave behind? Only a few letters. But those letters—the record of a soul which gave itself freely to be the channel for the Spirit of GOD—have changed the face of Europe and moulded the destinies of the race. They have held up the light of GOD to thousands of weaker hearts.

If we know physical forces by the magnitude of their effects, shall we not know spiritual forces in like manner? Why did the martyrs to CHRIST choose to be cast naked to the beasts in the amphitheatre rather than throw a few grains of incense on the altar to the Numen Imperatoris? What does the Epistle to the Hebrews say of those who

withstood the persecutions of Antiochus and Nero? "Others had trials of mockings and scourgings, yea moreover of bonds and imprisonment: they were stoned, they were sawn asunder, they were tempted, they were slain with the sword: they went about in sheepskins and goatskins; being destitute, afflicted, evil-entreated (of whom the world was not worthy), wandering in deserts and mountains and caves and the holes of the earth" (Heb. xi. 36). Are not such lives the best of all proofs of something greater and nobler than the mere bodily life?

Consider the thousands of lives freely given this year to maintain the liberty which you boys and girls will inherit—the discoverers, the soldiers, the sailors, who wrought their lives long, with dogged courage, to build up and strengthen what they saw to be worth living for, careless of honours, wealth, or reward of any kind. And not only the great men whose names History records, but the hundreds of nameless lives that have not even position to gain. Do you think that our soldiers and sailors who have even now given their best so freely have done it for pay? Do you think that the doctor or teacher thinks first of his fees and how little "fag" will earn them, or of healing and teaching as well as ever he can? Do you not know that every professional man meets cases in which he must give some of his best work without any remuneration at all? Do you think that even a good workman is doing his work in mine or foundry *only* for the day's wage? It would be a very poor doctor or

teacher who worked only for hire. Again and again every professional man is called on to do his best not only for nothing, but even in spite of ignorance and ingratitude. Why do they do it? Because the same Creative Mind which gives to the animal the instincts whereby it serves the general life of the world in serving its own life, gives to the human soul the higher instinct "to scorn delights and live laborious days."

And what of the exact reverse of the animal "struggle for existence"—the self-sacrifice which lays life down? Some years ago a Royal Mail steamer foundered after a collision in thick fog off the coast of Spain. The colliding vessel was not seen or known; she backed off. The liner filled rapidly and sank in twenty minutes. There was not room for all, as several of her boats had been too much injured to float. Women, children, passengers, and part of the crew were put into the remaining boats by the officers without hurry, without disorder, with the same cheerful alacrity with which they would have been put on shore at the end of the voyage. The officers remained on the sinking ship, and the last thing the boats heard was the first officer's cheerful "Aye, aye, sir," to some order given by the captain. With every wreck that takes place the same devotion is seen. It was seen on the *Titanic* when the great liner ran on an iceberg and sank, carrying 1,500 lives with her—captain and officers all quietly, firmly doing all possible to save others, regardless of their own lives. Why do we honour soldiers and sailors? Because we know that they really will lay down

their lives at duty's call. Why do we honour the skipper even of a little ferry-boat? Because we know that this man, however rough in manners, will be the last to leave his craft in time of danger. This devotion to duty, this unselfish service, is the best of all proofs of the reality of the human soul and its contact with the Divine Spirit. The world has plenty of men and women who are living for duty, and every one who so lives is a witness to the life of the soul as the true human evolution. If we were but higher animals, bodily comfort would be our sole definition of what is "good" and "right."

There are other evidences of the reality of spirit. One is the general existence of Religion. In all ages and in all lands men have felt that there is something in Nature akin to the best in themselves: the forms in which they express that idea are merely the expression of the degree of their enlightenment. The savage makes tribal custom and "fetish." In the early stages of civilization he imagines everything to have a "spirit," more or less like his own. He makes charms for the good and exorcisms for the evil "spirits." He then comes to discover that the powers of Nature are neither good nor bad in themselves, but only as they are used. He develops the mind which perceives the One GOD—a GOD of Righteousness. This evolution also is under guidance of the One Divine Spirit which brings good out of evil and life out of death. But he does not *invent* the idea, he discovers the fact.

4. Lord Brougham's vision.

It is quite vain to look for the "origin of religion" in dreams and the like. These, of course, had their share, but the many recorded and unrecorded instances of the supernatural [1] are much more than sufficient to account for its existence. Instances of the supernatural abound throughout history, from the appearance of the murdered Cæsar to Brutus before Philippi to the present day. We may laugh at "ghosts," and it is quite true that most ghost stories are rank nonsense, but there are many appearances which show the survival of the human soul. One of the most striking of these is given by Mr. Harold Begbie in his book "Religion and the Crisis," p. 67. He says :—

> Let me recount to the reader an incident recorded by the great Lord Brougham in his Memoirs. . . . I came across it quite by accident in some family papers. Lord Brougham, let me remind the reader, was a man singularly hard-headed and shrewd. . . . Henry Reeve says of him in the "Encyclopædia Britannica" : "His indomitable energy, his vehement eloquence, his enthusiastic attachment to the cause of freedom, progress, and humanity, to which he rendered such signal services, caused him to be justly regarded as one of the most extraordinary and illustrious men of his age and of his country." The extract from his Memoirs is as follows :—
>
> A most remarkable thing happened to me, so remarkable that I must tell the story from the beginning. After I left

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[1] "Supernatural." This word is used advisedly. Of course the supernatural is in a sense a higher "natural," but the one concerns animal nature, and the other spiritual nature. It is a "natural" of a higher rank.

the High School [i.e. Edinburgh] I went with G——, my most intimate friend, to attend the classes of the University.

There was no divinity class, but we frequently in our walks discussed many grave subjects—among others the immortality of the soul and a future state. This question and the possibility of the dead appearing to the living were the subjects of much speculation, and we actually committed the folly of drawing up an agreement, written with our blood to the effect that whichever of us died the first should appear to the other, and thus solve the doubts we had entertained of the life after death.

After we had finished our classes at the college, G—— went to India, having got an appointment in the Civil Service there. He seldom wrote to me, and after the lapse of a few years, I had nearly forgotten his existence. One day I had taken a warm bath, and while lying in it enjoying the heat, I turned my head round, looking towards the chair on which I had deposited my clothes, as I was about to get out of the bath. On the chair sat G——, looking calmly at me. How I got out of the bath I know not, but on recovering my senses I found myself sprawling on the floor. The apparition, or whatever it was that had taken the likeness of G——, had disappeared. This vision had produced such a shock that I had no inclination to talk about it, or to speak about it even to Stewart; but the impression made upon me was too vivid to be forgotten easily, and so strongly was I affected by it that I have here written down the whole history, with the date, 19th December, and all particulars, as they are fresh before me now. No doubt I had fallen asleep, and that the appearance presented so distinctly before my eyes was a dream I cannot doubt, yet for years I had had no communication with G——, nor had there been anything to recall him to my recollection. Nothing had taken place concerning our Swedish travels connected with G—— or with India, or with anything relating to him or to any member of his family. I recollected quickly enough our old discussion, and the bargain we had made. I could not discharge from my mind the impression that G—— must have died, and that his appearance to me was to be received

by me as a proof of a future state. This was on the 19th December, 1799.

In October 1862 Lord Brougham added a postscript :—

I have just been copying out from my journal the account of this strange dream. *Certissima mortis imago*, and now to finish the story begun about sixty years ago. Soon after my return to Edinburgh there arrived a letter from India announcing G——'s death, and that he died on the 19th December, 1799.

Such evidence from such a man, supported as it is by hundreds of other instances, should persuade all reasonable people, all people who have not rigidly shut the doors of their minds against inquiry, that the soul of man is not merely a co-ordination of brain-cells. . . . If it be argued that this is a case of telepathy, I reply that it is indeed a case of telepathy —between a disembodied spirit and a living man.

Everywhere one may find stories of a similar kind. They are legion. There are scores of books filled with such records, many of the records set down by men and women of unquestionable reputation both for honesty and common sense. Why, then, is not the world convinced ? It is only because the experience has not happened to us. But have we ever sought to know the truth of immortality ? He who had no doubts on the question said, " Seek, and ye shall find."

5. The Power of Prophecy.

Not only have there been hundreds of cases recorded of quite unexpected appearances at the time of death or soon afterwards, but there are many proofs of special powers of the spirit, quite apart from the faculties we all possess. Of these " prophecy " is one. This is by no means confined to the prophecies recorded in the Bible. La Harpe gives the story how Cazotte in 1788, at a dinner-party where the guests were making merry over the revolt from Christianity which was the

fashion of the day, fell into a sort of trance, and told the several members of that brilliant company their coming fate—how Condorcet, then rejoicing in the coming Revolt of Man, would take poison in prison to escape its horrors ; how Champfort would stab himself to avoid the guillotine ; how Vic d'Azyr, Bailly, and Madame de Grammont would die on the scaffold ; and that another, then the noisiest of unbelievers, would die a Christian. Within six years all had come to pass. I myself saw in 1869, during the Franco-German War, a book containing the prophecies of a French nun, printed some ten years before, in which it was declared that the then Emperor would reign " fifteen years and nine months." This was verified to the day : the surrender at Sedan was on September 2nd, 1869, just fifteen years and nine months after the Coup d'Etat of December 2nd, 1854.

In *Blackwood's Magazine* for August 1910, Colonel Percy Machell, C.M.G., Inspector-General of the Egyptian Coastguard Department, told us that at Tokar in 1892, five years before the battle of the Atbara and six years before the battle of Omdurman, some of the prophecies of Sid Hasan el Merghani, an Arab sheikh who was revered for his prophetic gift, were repeated to him in Egypt.

Colonel Machell says: " Fifteen years earlier the sheikh had preached that evil days were in store for the Sudan . . . ' when those that stand by the Government will fly, and will be lucky if they escape with their lives.' The flame of insur-

rection would not first appear in the Sudan, but the fire would be kindled in Egypt, after which the whole Sudan would rise, and the people would not be appeased until the land had been deluged in blood and whole tribes had disappeared. The work of reconquest and re-establishment of order would fall upon 'the Ingliz,' who, after suppressing the revolt in Egypt . . . would rule the Turk and the Sudanese together. The idea of the Turk being ruled by any one was received with special incredulity, and, on his being pressed to explain who these mighty Ingliz were, he said they were 'a people from the North, tall of stature, and white.' The final struggle for the supremacy in the Sudan would take place on the great plain of Kerreri, to the north of Omdurman : and pointing to the desert outside Kassala, which was covered with large white stones, he said, 'After the battle the plain of El Kerreri will be strewn with human skulls as thickly as this is now covered with stones.' "

All this was fulfilled to the letter ; even the great fight of September 2, 1898, came off exactly where El Merghani had predicted, and a special correspondent described the plain as white with the jibbah-clad corpses.

The Hebrew prophets were but the greatest and best of many prophets. The Return of the Risen CHRIST to the little band in the upper chamber is but the archetype of many much less distinguished visitations. Proofs of the deathless soul abound for those who do not close their eyes to evidence, though all white-sheeted and chain-

clanking "ghosts" are absurdities. Men who wish to know the truth have always found it. A thousand years before CHRIST, the Hindu prophet wrote in the "Song Celestial" concerning human birth and death :—

Birthless and deathless and changeless abideth the spirit for ever ;
Death hath not touched it at all, dead though the house of it seems.

II.

MEN AND WOMEN HAVE SEPARATE DUTIES IN THE CIVILIZATION WHICH IS THE MEANS OF EVOLUTION.

6. "Replenish the earth and subdue it."

This human race, whose goal of Evolution is the perfection of the deathless soul, is divided into two halves by the Wisdom of GOD—"Male and female created He them." Theirs is an indissoluble partnership in their task to replenish and subdue the earth.

Now carry your mind back to what was said in Chapter III about Energy. All things soever that you can see were made by Energy causing the movement of their atoms and cells into set forms. In Nature this direction of Energy in plants and animals, each after its kind, is unconscious. But to man is given the power to direct energy consciously to serve his ends, and to each sex is given special powers for the work it has to do.

The man uses fire to warm him, to cook his

food, to smelt metals. He directs the streams, ploughs, sows, and reaps, tames animals and sets them to his tasks, the horse to ride, the ox to plough, the camel and the ass to bear burdens. Later he uses the winds to carry his ships over the seas, to grind his corn, and to turn his machinery. Later still he discovers that the seven great energies of Nature—Gravity, Heat, Chemical Affinity, Electricity, Magnetism, Motion, and Light—can be converted into one another ; he uses the energy of the waterfall to generate magnetism, and that again to produce the electricity which drives his trains, runs his machinery, and lights his towns. He uses chemical explosives to bore through the mountains and to burrow in the earth for coal or iron or gold. *From the beginning of Time the work of men has been the direction of the forces of Nature—the subduing of the earth.* Men drive the road and bridge the ford and canalize the river. They build ships and cities, navigate the seas, exploit mines and quarries, forge the glowing metal, make the foundry, the workshop, the spinning and weaving mill, the printing press, the dynamo, and the engines of war. They make fleets and armies, a science of attack and defence. They invent currency, the bill of exchange, credit, and the banking system, and all the complex machinery of commerce and enterprise which depends on system and rule observed by all who take part in it. They classify language into grammar, and external facts into sciences. Every man worth his salt has some part in this great work. He is the Lord of Toil, and he finds

pleasure in producing its results. That is, the muscular energy of the brutes and the physical energies of Nature are applied by him to carry out his intentions. What these intentions are, whether bad or good, is decided by the quality of his spirit.

In the making of all these externals of civilization women have no share. But these things do not of themselves make a civilization—that depends on the uses to which they are put. A poor household where kindliness, industry, and good manners reign is much more civilized than the most wealthy wherein these are not found. True civilization exists where men and women are truthful, faithful, just, honourable, and intelligent, each fulfilling his or her duties well; and I hope to show you that neither men alone nor women alone are able to make that civilization which they can so admirably produce in partnership.

7. Women's work and influence.

I am not going to set out women's work in detail, but I am going to point out some large outstanding facts which will, I trust, show both my boy and girl readers how the woman's half of that civilization is even more important than the man's:—

(*a*) The life of the nation is greater and far more important than the life of any individual in it.

(*b*) Every thirty years a new generation comes to maturity and makes the nation afresh.

What each generation does with its heritage

depends on its modes of life and thought—the kind of homes it has, the kind of things it thinks worth while, the ends to which it directs its energies—whether to luxury and display, to personal indulgence, to ambition for the few, or to health and happiness for the many.

(*c*) No home is possible without a woman to originate and direct it.

(*d*) Women have the spending of three-fifths of the incomes of the nation ; they make the homes ; and not merely the comfort but the future of all the inmates of the home depends in the first place on a woman's ability, good sense, and good taste.

(*e*) Therefore she is from the very first, and in the simplest and most obvious way, the Directress of the Forces which make for life or death, health or degeneracy, prosperity or decay. If man is the Lord of Toil, woman is the Lady of Life.

In her home she is despotic—her will is its law. Her will, but not her whim. She needs to know all that has to do with the maintenance of health, what food is necessary and how it should be prepared, how a house should be fitted up to secure the health of its inmates, its warming, ventilation, and drainage ; what things are luxuries and what are essentials ; how children grow to health and strength, and what weakens them in body and character. Also the practical management of money, which it is (and, broadly speaking, always will be) the man's duty to earn.

These are a woman's first duties in the partner-

ship which Nature has decreed. These are the first things which every girl should be prepared to carry out. It is for the man to be useful to the world in some special capacity by which he fills a place in the nation or earns a livelihood for the family. It is for the woman to spend money wisely, apportioning the income at her disposal to food, shelter, clothing, education, amusements, and those social objects which belong to the present and future well-being of the family, and through the family of the nation.

That is, (speaking generally again), it is for the man to be clever at some particular thing, it is for the woman to be wise.[1]

Now, this involves very much more than a rule-of-thumb ability to "run a house." The woman who thinks her duties end there has scarcely begun to live. Woman is by right a despot in her home, but her despotism is maintained, not by her force but by her influence. That influence she has to create and maintain ; and the influence of sister, lover, wife, and mother is just the most powerful in the world, and by far the most fruitful of results for good or evil. If she is to be truly respected and honoured, her menkind must feel that she understands the true purposes of life. It is even more important that a girl should have this knowledge than a boy. There should be no need,

[1] This chapter was written before I had seen Mr. G. K. Chesterton's "What's Wrong with the World?" in which a similar view is given with inimitable wit and brilliancy. I do not advise my boy reader to turn to that book, he will not understand it. Some girls might.

and in the vast majority of cases there is no need, that she should be able to earn money as a man does ; but it is of the greatest importance that she should know how money is earned, and should be able to distinguish between honest and dishonest earning, and between useful and useless spending.

It is of no consequence that she should pass examinations and hold certificates in modern languages, science, or history, but it is of the utmost importance that she should know the principles that these knowledges ought to carry with them. Mere knowledge of a foreign tongue is of slight use if it is merely to speak to tradesmen and servants on a trip abroad, but if it leads her to enter with lively imagination into the modes of thought of other nations as expressed by their literature, she will be a force for peace and goodwill wherever she goes, raising the esteem of her own country in the eyes of strangers.

A certificate in Chemistry or Physics is of next to no value ; but familiarity with scientific proof, ability to reason closely and mathematically, and to understand the working of natural laws, to be able to explain to herself every natural fact by its principles—these are of quite inestimable worth. She has to know all that a man has to know if she is to be a complete woman, though not in quite the same way, for the boy will be called upon to apply his knowledge in some special way—to specialize : she will be called upon to understand, to appraise, and to use, the work of specialists, and to distinguish between truth and quackery, between opinions and proofs, which at present very few

are able to do, wherefore quacks and frauds flourish exceedingly.

Mere knowledge of the dates of events in the history of England is of no use whatever. But if she realizes the stages by which the country grew from rude Saxon life to Norman culture; the theory of mutual dependence on which Feudalism [1] was founded, the substitution of rent for service, and the selfishness and tyranny which sealed its doom; the rise of the self-governing towns; the struggle between absolute authority and the right to self-government which led to civil and religious liberty; the theory of the balance of power in Europe, which assumes that strength will always be used for ambition; the growth of constitutional government based on "democracy"—whose leading idea is the responsibility of every man and every woman in every sphere of life for wise self-direction—if she realizes all this she will have grasped the principles behind human Evolution, and will know what is meant by the "progress of mankind," and what are the real causes of good and ill that act on individuals, and through individuals on nations.

This is the meaning and value of history. Imagination is the faculty that illuminates it and makes it of use; and this, Woman is specially fitted to give. Read "I Will Maintain," "Defender of the Faith," and "GOD and the King,"

[1] Feudalism was founded on *mutual* service. The aim of a baron was not to get the maximum of rent from his land—he got scarcely any: it was to maintain on it as many strong and healthy families as possible to be his retainers.

in which Marjorie Bowen shows the heart of a man —the chief of a small nation and petty State—who inspired his people with his own indomitable courage, humbled the pride of armies ten times as numerous as his own, and raised his nation to be the bulwark of the liberties of Europe when our English king was the paid servant of Louis XIV. Or read "The Judgment of the Sword," in which Maud Diver tells how incompetence and self-seeking and blindness led to the massacre of an army; and "The Defender of Herat," the story of the heroism of Eldred Pottinger, one of those undistinguished heroes who are the glory of the English name. You will find in each case the romance of history and the way in which womanly sympathy gives that insight into personal character which enables her to trace the personal causes which lead to greatness or failure.

8. Woman's sympathy.

If I must define a woman's chief means of influence, I should say it is SYMPATHY. We may love without understanding, but we cannot sympathize without understanding.

There is much more in this than appears at first sight, and I can best explain it in the words of the woman to whom this book is dedicated, who knew and fully understood its meaning. She was commenting on Lafcadio Hearn's "Heart of Japan," and more especially on that passage in which he says :—

> Sympathy is limited by comprehension. We may sympathise to the same degree that we understand. One may imagine that

he sympathises with a Japanese or a Chinese ; but the sympathy can never be real to more than a small extent outside of the simplest phases of common emotional life, because we have neither his traditions nor his experiences.

She said :—

I know now wherein lies the charm of the East for me. It is in the entire absence of individualism. I understand now also why our individualism is impossible and repellent to the Eastern. When a man regards his life as a link in a long chain of previous and future lives, and his religion teaches him not only reverence but gratitude for the past ; when he believes that all he does and says is in sight and presence of his dead—this surely is a restraining and refining influence to which we have nothing comparable.

And this is "popular religion" in Japan. A man takes up a garment, folds it reverently and carefully. Why ? Not because he is impressed with the value of the silk, or even by the beauty of its embroidery, but because he is thinking reverently of the human thought and skill and labour that went to the making of it—"the toil of one poor woman," as he simply explains. And she is dead, and the garment represents her thought, her skill, and her toil, and is therefore sacred to him. When religion has so penetrated the national life as to make men feel thus about the common things of everyday life, it is indeed a living power ! Here are no watertight compartments ! The worker shapes his wood or stone for the eyes of his ancestors, and for those "wiser, other eyes" that will be his in the next existence. The beggar wishes you "a good re-incarnation" as we wish "a happy new year." Men feel themselves the connecting-links between a great past and yet greater future. To be, is to know that we have been, and will be. What strength has individualism to offer comparable with this sense of continuity ? What "popular religion" have we that so moulds our modes of thought and life ?

Of course I know the answer that men of our many creeds would make. I know, too, how this, and more, was in the mind of Christ. But I also know that such reverence for the past and for the work of others is only possible to the refined. What

impresses me is that this is the *popular feeling* in Japan. And we send them missionaries to convert "the heathen," and talk glibly of their religion as a "false religion," and their "gods of wood and stone"!

These are the comments of the woman who can lead men, because men feel that she understands and knows. She did not change her own point of view because she could adopt another for the moment; she understood most clearly that if the sense of being a link in a chain is the most powerful incentive to the Asiatic, the strength of personal character remains the aim of the European. There was no semblance of the "blue-stocking" or the "school-mistress" about her. I have seen her in both English and foreign society sought out by men for her distinction and charm. I have seen her with little children gathered round her, nestling against her and hanging on her words. I have seen her playing and laughing with young men and girls as though she had no deeper thoughts than a drawing-room game. The support and guide of a widowed mother, I have seen her grappling with sorrow and sickness, and facing difficulties which would have tried a strong man, and winning her way through them. She was "the woman who knows," and leads because she commands the best that a man can give. Her example should show my girl reader the real meaning of Sympathy, how distinct it is from love and from pity, whether it be sympathy for a child, for a man, or for a nation. It is Understanding moved by Love. Not only does it enable us to interpret the opinions of others—often only imperfectly expressed—but it en-

ables us to see our own opinions in proportion and perspective ; for as long as we have no true conception of the opinions of others we can have no standard whereby to judge our own—they fill our whole horizon and seem to us of quite undue importance and value.

There is no need for all to acquire Oriental sympathies ; nevertheless the future of India depends largely on Englishmen doing so—even sympathy for wrong-headedness,—for " sympathy " by no means excludes stern measures against wrong-doing, or implies the weakness which sacrifices the welfare of the many to the sentiments of the few.

Irish questions, Indian questions, international questions of all kinds, are only to be solved by sympathetic understanding of the exact facts, together with a firm resolution to maintain to the death the principle of Justice for all, and stern repression of that most plausible of crimes, the " doing evil that good may come," concerning which the Apostle says of those who do it, that their " damnation is just." This power of sympathy is far more natural to a woman than to a man. Few men have it naturally—they have to look out for themselves too much in a competitive world, and their work is too rough—though they may get it by the experience of life. Men are rightly concerned with general laws and natural causes. The mastery of Nature needs strength first of all. But Woman is the Lady of Life. Every little girl that nurses a doll shows the budding instinct. And it is for the same reason

that women are rightly drawn to the medical, teaching, and nursing professions.

It is in virtue of this power that Woman occupies a privileged position in every civilized land—the position that violence and rudeness must not be used to her. And this privilege carries with it the implied obligation that her own actions are governed by gentleness, reasonableness, order, grace, and courtesy—the spiritual forces that civilize. Petulance, "temper," obstinacy, and violence lead to the total loss of her influence in the world; she then becomes just "the lesser man," weaker, less logical, losing her own ability to direct Life, and gaining none of his power to direct Nature.

These are, in outline and principle, the respective functions of men and women in a civilized land. Right thinking is therefore the path of Evolution for Humanity; not mere correct opinions, but right thinking applied to each and all of the various duties of life—to hand-work as well as brain-work—to the work of women as well as to the work of men. And in nothing is this right thinking more necessary than in the relations of the sexes to one another.

9. Essential difference of the sexes.

Now I will write something for you, my girl reader, who may be curious, as many girls are, about the real unalterable difference between men and women.

Relatively to each other, the one sex is active and expends energy freely; the other is quiet and stores energy. This is an unalterable physio-

logical fact which is seen throughout Nature. It is not an opinion, it is a scientific fact. Mankind is no exception ; the field work or any heavy physical work which strengthens a man wears out a woman, destroys her beauty, and ages her prematurely, as may be seen in all countries where women habitually work in the fields. A girl therefore cannot train herself to the same pitch of muscular strength as a boy—she is off her line of evolution if she tries to do so. She may, of course, be strong, active, and thoroughly fit ; but, after she has become a woman, heavy exertion is a mistake which Nature often avenges on her constitution.

And as Humanity is essentially soul rather than body, there is a fundamental difference between masculine and feminine minds. Men have the kind of mind that fits them for their special work. They are more logical and less intuitive, for tact is of no use in dealing with an engine or a furnace. If a man is fully virile he will be physically strong and active ; if he is not a fool he will be interested in the causes which make things what they are ; if he is not a coward he will love moderate danger ; if he is not vain he will love Justice, especially the justice that proceeds from law, as contrasted with the personal justice which proceeds from a ruler. Man is disposed to rate the general law so high as not to care much how it presses on individuals —the masculine tendency is to look at things *en masse*. Men often " do not see the trees for the wood " ; exceptions do not count ; they would reduce a whole country to one system, whether

under an emperor, or a pope, or a socialist committee, by means of a set plan. They set up a system of Church and State, or "Liberty, Equality, Fraternity," or Socialism, or autocracy, and bow down to it. The tyrannies of Church history and of State history have their root in this tendency of the masculine mind. So likewise has the revolt from personal government which has produced, in all civilized lands, Constitutions based on the co-operation of all in the making of law.

The feminine mind, on the other hand, is less logical and more intuitive. It is intuition, not logic, that directs lives; logic only finds reasons for what the intuition discerns. Woman is always ready to adapt the unbending law to the needs of the individual, and to make exceptions. She is a born despot; she prefers to receive, and to dispense, *personal* justice. She will admit any number of exceptions, even to the disappearance of the general law; often she "cannot see the wood for the trees." It is in her nature to show favour, and to adapt measures to character. The will of the mistress is the law of the household; it is for her to make it a just, loving, sympathetic will. That every strong man gladly surrenders to the sweet compulsion of the woman he loves, does not alter the fact that her rule is despotic. *Sic volo sic jubeo, stet pro ratione voluntas,* is a man's usual experience, and we try to please the woman we love by doing as she wishes. Happy is the man who is sent forward by his Queen to take up some position in advance of his fellows, that he may excel in her eyes.

You may see the same things in women's opinions on politics—some women would rule a country as they would rule a kitchen—what "ought to be done" is what *the mistress thinks* should be done, not what history teaches or facts prove. Whether the parliamentary vote is or is not desirable for the nation at large is an arguable proposition on which reasonable people may take opposite sides for the present, but the Suffragists do not proceed to convert the mass of electors, nor even the mass of women; they do not point to real evils which only the women's vote can redress, they wish a despotic Ministry to bring in a despotic law whether the electors desire it or not. They put rhetoric for reasoning, and seek by a limited "frightfulness" to terrorize the public into giving them votes, just as a child is given a toy to stop its cries. I offer to my girl reader no argument for or against the suffrage; but it is a fact that one hears much more of "rights" than of "duties," and so much more declamation on the supposed "justice" of having a vote than of the service that vote is to render, that most men, and especially most women, are not disposed to listen to demands called for on personal grounds, and enforced by breaking windows and burning churches.

In short, dear girl reader, Nature has made you a despot, but see to it that your despotism be wise and unselfish, then will neither lover nor husband nor child ever revolt from it. Try your 'prentice hand as much as you like, but remember

when you put on your regalia that not the number of your subjects will be the measure of your glory, but the completeness of the devotion of the one. Remember that influence, not argument, is your sceptre: arguments nearly always fail to convince because they should be (but are not) built upon axioms agreed by both parties. This condition is seldom observed by men, and scarcely ever by women. Sophistry can always find arguments, and the "woman's reason"—"because it is so"—is a quite good one if she who uses it is wise; but do not delude yourself, as so many women do, that Intuition needs no training and no care. The shrew and the scold try to get their way by volubility, and generally fail; when they succeed, it is by inspiring weariness and disgust. The coquette gets it by flattery or by playing off one against another, *till she is found out*. The wise woman rules, and can rule, only by wisdom, and all wisdom is akin to the Divine Power which transforms the mass by working through the infinitely little, through the individual. Wise democracy in the nation, wise despotism in the home, is the true path of human evolution, and nothing can overthrow that law. It is not for an empty figure of speech that in sacred literature Wisdom is made feminine, ironical as this might seem when we see girls' foolishness.

"Wisdom crieth aloud in the street. She uttereth her voice in the broad places" (Prov. i. 20).

"Wisdom reacheth from one end to another mightily: and sweetly doth she order all

things. I loved her and sought her out from my youth ; I desired to make her my spouse, and I was a lover of her beauty. . . . For she is privy to the mysteries of the knowledge of God and a lover of His works " (Wisdom of Solomon viii. 1, 2, 4).

In the alliance of man and woman lies the future of the race. Right thinking is the basis of that alliance. Boys and girls may seek it each in their own way. Thought designs, and right thought designs rightly. Everything that man makes—a watch, a ship, a picture, a law, a home, a government—exists first as ideals, i.e. as thoughts. And there can be no right thinking if the greatest of all facts—God and His relation to the soul—be left out of account, nor if these are travestied and falsified, whether by denial, by false reasoning, or by superstition.

III

The Means of Evolution and of Degeneracy

10. Upwards or downwards.

There are three great causes of progress—Understanding, Self-activity, and Self-discipline ; and these come by the guidance of that Spirit of Wisdom which is the grace of God—by receiving that guidance as a precious friend.

There are three great causes of degeneracy ; they are, Laziness, Stupidity, and Self-indulgence.

Laziness is the commonest ; no boy or girl has experience enough to know what *must* be

the results of "shirking," and few have the sense of duty which would take the place of experience: they shirk cleanliness (boys at least do), shirk trouble, shirk interest, shirk duty, and in the end find that they have succeeded in shirking respect, competence, position, affection, and all that makes life worth living.

Stupidity is very rarely a misfortune, it is nearly always a fault; for true stupidity is not inability to understand, which is sooner or later outgrown, but unwillingness to understand, which gets worse with age. It is the drawing down of a blind in our minds on something we do not wish to look at—a peculiar and disgraceful form of mental ugliness. Its origin is not lack of ability but lack of interest, or a resolute determination not to part with a prejudice. Twenty years' experience has shown me that while certain boys have of course special abilities and aptitudes, as for languages, mathematics, or science, or handwork, or music, or something else, the great majority of healthy boys could excel in something or other, and could take a firm grasp of all the principles of a liberal education if they would put their minds to them. I have known a seemingly dull boy of thirteen come out brilliantly when for his own private ends he really desired to understand his work.

Self-indulgence is a more frequent cause of disaster than stupidity. Indulgence of the bodily desires, slight at first, is made into links of iron by habit, and goes on to overmaster the soul, *till the body, with all its shortcomings, takes the place of the spirit and becomes the person.* The

soul shrinks and dwindles, till at death it awakens to all it has lost. Sometimes the indulgence is of food and drink or softness of all kinds, sometimes of base passions, sometimes of vanity, dress, or self-will. There have unfortunately been many cases of late of girls in whom the thirst for prominence and sensation has become a passion, and the craze for revolt a disease.

I believe that if boys and girls knew the whole truth about the miseries that flow from these three causes—laziness, stupidity, and self-indulgence—they would never look on warnings as "pi-jaw." Unfortunately, one may not say the tenth part of what one knows about the deadly poison that is poured year by year into the veins of Humanity, but I will give you three authentic examples of the way in which these three causes operate to reverse the natural evolution of a high type of man.

Laziness.—In the *Times* of June 16, 1914, occurs the following letter from a clergyman whom indolence has reduced to cadging for a livelihood for the occasional guineas paid to substitutes who take Sunday services in an emergency. Read between the lines of this letter from a man certainly clever, the whole sad tale of his wasted opportunities at school and college. This is but one out of hundreds of such wrecked lives; and, given the cause, the results are *inevitable*.

To the Editor of the *Times*.

SIR,—As one of the "regulars" in the night-shelters you describe in the *Times* of June 10th, I feel that your account lacks almost as much knowledge as it imparts. . . . To be frank, there

is no knowledge of the dwellers. The very men and women for whose sake these abodes of Dis exist, who give them the meaning, colour, and life they have, are passed over as items in a catalogue.

You speak of going round with a policeman. My dear sir, we of the underworld have less need to be policed than any class in the Empire. The matter with us is that we have too little vitality. That it is which has brought us to our own place. We are not criminals or evil-doers. . . . We are good-natured, kindly ineffectives. We are not angry at our fate. We know it had to be so.

The other night in the common kitchen of my favourite house in the Blackfriars Road I forgathered with an old schoolfellow. He was at Rhoades House, and I at the School House. We were at different Universities. We discussed the old days ; but there were no inquiries as to why or how we arrived at the haven of the doss-house. He, I suspect, found that business irked. He liked to indulge his genius and to drift. He did not ask, he could not know, how I arrived at my status of "guinea-pig" in the Established Church. . . . Acceptance of things as they are is the note among us. Artisans, labourers, soldiers, clerks, clergy, we are all alike in this—we neither struggle nor complain. So it is, too, with those with whom a few nights ago I companied on the Embankment. For us the wages of life is the mere going on. And we shall, without a word, pass, when the time comes, beyond.

If you visit us again come alone ; come to the fourpenny doss in the Blackfriars Road. I shall not have my clerical collar on—that is for the Sundays, rare and alien now, when I earn my guinea or two. But I shall be glad to meet you. I shall drop this in Printing House Square on my way to Blackfriars Road.

Yours very truly,

* * *

This is the story of pure laziness and its end. Those who have investigated scores of these cases know that lack of vitality means wasted vitality ; wasted by want of wholesome endeavour when youth and strength were theirs to use.

Stupidity.—The next story is one that I saw personally, and for whose details I can vouch.

A—— B—— was the son of an officer high up in the Service. He was certainly not lazy, but on the contrary active and lively. He was, however, stupid with that obstinate stupidity which causes a boy at school to shut his eyes to facts, and his ears to warning, and his mind to punishment. He meant "to have a good time." The natural result followed—inability to pass any of the examinations which the professions rightly place at their gates to shut out the stupid, the lazy, and the incompetent. His father begged for a post as sub-storekeeper on the Indian Railways. It was given, with the intimation that two or three years of steady hard work and honesty as a subordinate might be rewarded by promotion into the officers' grade. For six months he behaved well outwardly, while he raged inwardly against the "fate" and the "hard luck" which deprived him of "what other fellows had." The old stupid refusal to face facts took hold of him. He began to neglect his duties for amusements, and to drink more than was good for him, and much more than he could pay for. There was reason to think that he cheated in his accounts. A sharp warning followed, and again he ran straight for a while. Then he married a girl who loved him, and pitied him, and set herself to save him. He implored her to save him from himself and keep him straight. The Chief shook his head over the marriage, but gave the pair the best chance he could by moving them to a

small station where were but three or four Europeans, and none of the temptations to roystering in the company of a number of young men at headquarters. It was easy for B—— to settle down to quiet, economical living. For a time all went well. Then he found the life dull. He wanted excitement, and began drinking again. He was warned that drinking meant debt or the embezzlement of the Government stores in his charge, and that in either case ruin would follow. He professed amendment, but kept on his course in secret. He was not ashamed to drop into friends' houses to cadge a drink. His poor brave wife begged their friends not to offer it. By this time the craving had mastered him, and he had all the jealousy of a weak man to "be master in his own house." He demanded of her the key of the sideboard where the single bottle was kept for guests. The brave girl refused. Then he actually got a revolver and threatened her. Still she refused, and, in I know not what access of madness, he pulled the trigger, the flash burning the bosom of her dress. She fell forward on her hands and knees, and her blood pattered on the floor. He fired again behind her ear, and there was silence in the house for half an hour. The servants were too frightened to enter.

What took place in that half-hour—whether mere ghastly remorse or despair, or repentance as he saw before him the whole of their wasted lives—only GOD, to whom all hearts are open, and from whom no secrets are hid, can know.

But after half an hour came another shot, and he fell dead by his own hand. The servants went in, and the whole ghastly story came out at the inquest—the story of rank, wilful stupidity which *will* not see the truth.

Self-will.—The third story was told in the Coroner's court at Westminster, and reported in the *Times* of June 16, 1914. It is a girl's story, and the saddest of the three. The bare report is as follows:—

> An inquiry was held at Westminster yesterday into the death, at her flat, of Miss ——, a young lady known as "Laura Grey," who was formerly a militant Suffragist. Her mother . . . described her as having been a spiritually minded girl, highly educated, and self-sacrificing, but not quite normal. Some years ago she became a militant Suffragist, and in 1912 served a term of imprisonment, during part of which she refused food. Afterwards she left home and went on the stage. Since then it was shown by other evidence that she had become addicted to alcohol and drugs, and for the past eighteen months she had been frequenting night-clubs, and leading an immoral life. The post-mortem examination revealed the fact that she was pregnant.
>
> A verdict was returned of "Suicide during temporary insanity," death being due to an overdose of veronal, purposely taken.

This is the bare outline, which tells nothing of the steps by which this misguided girl was led to her end. It is the pain and remorse that she underwent, by reason, not of indolence and love of luxury but of determined self-will, that is to the point here, and constitutes the justification for recalling all her sad story, that it may be a warning to others instead of leaving it to kind oblivion.

The evidence given at the inquest made it quite

clear that, so far from being one of those who go wrong through low desires, she did not care much for the ordinary enjoyments of life. She studied hard, had ideas of Socialism, and of giving her all to her more unfortunate sister women. But from the age of sixteen she showed that fatal habit of closing her mind to reason or remonstrance which is too often mistaken for a strong will. To have her own way was her dominant characteristic, as it is of many boys and girls who are uncontrollable by affection, or experience, or reason. She pushed theories to an extreme. She left her home because she considered its life too luxurious and idle (as it may perhaps have been), and went to work alone, living in a very self-sacrificing manner, and denying herself everything.

She thought that a woman should earn her own living, "because every one should earn their own bread"—a sound rule for a man, which is not by any means applicable to all women, who have many spheres of usefulness open to them, far higher than the bread-winning for mere existence. But she was in earnest, and she tried one vocation after another, her resolution carrying her through much hardship, though she remained deaf to the obvious lessons of experience. Then she went on the stage, and then to night-clubs, and then to the depths. But these are not the mistakes which come of an attraction to evil and luxury; quite the contrary, one sees but too clearly the disposition to self-sacrifice, the unbalanced Socialism, the hard work, the disappointments—

making her more and more set on overcoming disabilities and proving herself right—the neuralgia, the declining health, the weariness of failure, which made her take what poor pleasure was within her reach, the false friends who led her to ruin, and the final shame and self-disgust.

The report continues:—

Mrs. Spicer, who attended to Miss Grey's flat, said that on Monday she found the door of the flat open, and Miss Grey lying on the floor of her bedroom. The witness had never heard her threaten to take her life—"she was always so nice and bright."

The Coroner read the letters. One, dated May 26th, and addressed to the landlord, said:—

"I am sorry to have to leave the flat in this way, and to have given you so much trouble, but I think you will find all my affairs in order. At any rate, I can think of nobody to whom I owe any money." The letter went on to speak of receipts for rent, electric light, &c., and enclosed £1 10s. in gold. Another letter of the same date was to a firm of piano dealers asking them to call for the pianoforte, "as I am going out here."

Another letter was addressed to Mrs. Spicer, the charwoman, and stated:—

"I enclose 10s. in gold in recognition of all that you and your daughter have done for me." In a P.S. the recipient was asked to return a book to the St. Martin's Lane library.

A letter found on the bed was addressed to her mother. It stated:—

My dear Little Mother,—I am hoping that you will not get this foolish epistle for some time, at any rate that it will not be a great shock to you. I have given you so many. I am enclosing a few things that I do not know what to do with, but

I do not think there is any need for you to come back here, at least. I have left nothing behind to connect your name with mine. There are a few private letters that I had not the heart to destroy—you probably have one or two such yourself—and a pile of receipted bills. As far as I can remember I owe no money at all—in fact, it is a good deal the other way—and have left directions with the charwoman as to what to do with my clothes. I have been taking veronal for the last six months, practically every night. I only write about it to you because I know you would worry if I told you the truth.

Of course the kindly coroner will call it "temporary insanity," but as a matter of fact I think this is about the sanest thing I have yet done. I am simply very, very tired of things in general, and cannot see that the world will progress any the worse for me being out of it. It seems cowardly, I know, but I should only go on causing you more unhappiness, dear soul, for there are certain ways of life which it is absolutely impossible to give up. In fact, one does not want to. You are so pure and good that it is hard to write this to you, but I feel it to be the absolute truth. . . . No one in the world could have had a better or a more sympathetic mother than

L. G.

The Coroner, in summing up, said :—

There was a good deal of evidence that the girl's mind was very unstable. . . . The militants appeared to have got her thoroughly into their toils. It might well be that the mental and physical excitement of breaking plate-glass windows, assaulting policemen, going to prison, and being forcibly fed, did certainly increase the derangement of a mind already ill-balanced.

The Coroner then read the letter which accompanied a "medal for valour" which the W.S.P.U. sent the girl.

"Can anything," the Coroner commented, "be more calculated to upset the mind of a young girl than receiving this document and this travesty of a medal? At any rate, the letter had the effect on her. Till that moment she had been, it is true, a militant Suffragist, but she was living at home. . . . The effect on this young girl is quite clear. After this she began to

exaggerate her own importance. The weak mind probably gave way. She leaves her home, her sister, her mother, for a garret, in order to earn her own living, and probably to devote herself to the cause. She is next on the stage as a pantomime girl, and when a young girl, brought up as she was, starts to live the free and independent existence we hear so much about in England, men of the world know the danger she runs, a danger which this girl unfortunately did not escape. Next we find her in the company of men frequenting night-clubs, and taking money from them. There is no more about the Suffragist movement. The girl seems to have been absolutely degraded, and from then her whole history is one of drink, drugs, immorality, pregnancy, and death from her own hand.

Now, I should not have recorded this pitiful story had it been the story of a selfish, base-minded girl. It is precisely because it is the downfall of a high-minded one that it should not pass into oblivion. It is of quite terrible import. There are hundreds of girls who mistake wilfulness for strength, and are restrained from all this girl did, not by principle and good sense, but by fear of the self-denial and suffering which this girl faced unflinchingly till near the end. Her case is one of intense self-will, finally destroying all sense of balance and judgment. No base woman would have written those letters, thoughtful even of the return of a borrowed book. One who knew her well says of her:—

To know "Laura Grey" down to the incredible beginning of an appalling end, was to know a beautiful and gentle creature; one both gracious and unaffected, indeed as great-hearted and noble-minded and sweet-tempered a girl as ever looked like a Greek goddess, and carried herself like a queen. Erratic and wilful she no doubt had always been . . . but it is not too much to say that no handsome or amusing girl ever cared less for the

sweets of society, thought less of her looks, or her dress, or of personal popularity, or set less store by the admiration of men. Much has been made, too much it is perhaps impossible to make, of the slow and subtle sex-poison inherent in the methods and practices of militancy. . . . The thirst for sensation had become a passion, and the craze for revolt a disease, eating even deeper than the mind.

By what steps the last phase was reached, whether in the first instance by the tricks and traps to which one so reckless and so lawless, and yet not long ago so guileless too, would inevitably expose herself, may never now be known; but that the mind went first, and went completely, none who knew the L. G. of even two or three years ago can for an instant doubt. It may be that before the end she saw her terrible situation in its true light, and resolved to help herself to those wages which are death. Nothing could be more characteristic than the iron resolution with which the merciless self-sentence was carried out: there was the old misplaced pluck to the last; the old false yet gallant sportsmanship in and between the lines of every one of those last piteous yet strikingly non-self-pitying letters. There to the end was the tremendous will which had made her uncontrollable by her distracted friends. . . . My only longing is to show, however feebly, this young girl as she was before perverted sentiment made of her the woman who is dead, and as she will be affectionately remembered in one at least of those houses which she sometimes brightened with her then naïve and gracious wit, her then sweet and kind simplicity.

These are pitiful stories, and most true. They should not be hidden up and forgotten. Let no one think that he, or she, is safe from just such an end, or that any miracle will occur to avert the natural consequence of the acts which lead to it.

I doubt if any one of these—the clergyman who wastes his time as a boy because he hates "fag," and takes Orders because the examination

to be passed is very easy and the work light; or the boy who puts the facts of life away from his mind and wants a "good time" without earning it; or the girl who sets up her own self-will against friends and will "live her own life," were, to begin with, any "worse" people than you or I. "Laura Grey" was certainly not worse, but very much better, than those who are incapable of unselfish devotion to any one or anything.

But each of these ruined a life which began with promise, by one of the three great defects to which we are all in some degree tempted, and each paid the penalty. What followed to these poor souls we must leave to the mercy of GOD. But of this we may be sure, that the qualities which were lacking had to be gained somewhere and somehow. It may be that the remorse of a soul which sees too late its wasted opportunities may be the first step out of the slough of despondency for those who would not learn by love and reason, and can therefore only learn by pain. We know nothing for certain but the Justice and Mercy of GOD. But it is for us to take warning, and never to imagine that self-willed opposition to the lessons of experience is the mark of a brave and independent spirit.

11. To see right and do it is the true destiny of man.

I have tried to show you that the true destiny of man—the true path of evolution—is now to develop the qualities of mind and soul which enable each of us to fill nobly first our place in our

family, and then in our nation. To accept this is to accept joy and life ; to refuse it is to choose the way of degradation and despair.

This is hard scientific truth. Professor Huxley stated the ideal training in these words:—

> That a man should be "so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of ; whose intellect is a clear, cold, logic engine, with all its parts of equal strength, and in smooth working order ; ready, like a steam-engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind ; whose mind is stored with a knowledge of the great and fundamental truths of Nature and of the laws of her operations ; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience ; who has learned to love all beauty, whether of Nature or of art, to hate all vileness, and to respect others as himself."

That is to say, that the true evolution is the unfolding and development of the qualities of the human spirit first, and of those of the body as the servant and interpreter of the spirit. Therefore, these facts are indissolubly connected with the nature of the spirit and with the fact that there is really and truly a future life for the soul—a life in which we reap the consequences of past acts: a day of wrath and revelation of the righteous judgments of GOD, "who will render to every man according to his works: to them that by patience in well-doing seek for glory and honour and incorruption—eternal life ; but to them that are factious, and obey not the truth, but obey unrighteousness—

wrath and indignation, tribulation, and anguish upon every soul of man that worketh evil," not by way of punishment, but by stern consequences, for these alone can bring the wilfully blind to the Way, the Truth, and the Life.

But this is for "the factious," who set party gains, or worldly interests and profits, above Right. Not less clear than the warning is the promise of "glory and honour and peace to every man that worketh good." This also is not by reward, but by consequence; because this is the pre-destined path of human evolution—the Way of Ascent for all the children of GOD.

PART III

WHY ?

CHAPTER V

THE MYSTERY OF SEX

Blessed are the pure in heart, for they shall see GOD.

1. Sex the foundation of evolution.

YOU remember that one of the lowest forms of life—the amœba cell—grows by the separation of its two nuclei ; the cell taking first an hour-glass shape, then that of a figure 8, and finally splitting into two. This is generation by fission (Lat. *fingere, fissum* = splitting), in which sex plays no part. So when a gardener takes a " cutting " and plants it, there is life enough in the twig to grow roots and make a new plant. Some plants, such as crotons, are so full of life that a single leaf planted stalk down in the ground will grow into a bush. Even some animals, such as earthworms, if accidentally cut in two, grow into two complete worms.

NOW, GOD might indubitably have made all generation on some similar and painless plan. Instead, He saw fit to found all Evolution upon sex.

WHY?

This is the Mystery of Sex. Its answer is not

difficult, and I might give it you at once ; but it is much better that you should find it out for yourself. I think you will have found it out before you finish this chapter.

Meanwhile we must go back to the cell once more, for there is the clue to the riddle.

2. The cell once more.

Each living creature begins as a single cell. These cells, if you could be shown them under the microscope, would look to you much the same. The cells which are to develop into a tree, a fish, or a man differ scarcely at all in appearance, though they have within them such very different capacities of life.

Each contains two double " nuclei " or " poles " —tiny little black dots which are somehow the points of origin for growth—and also a certain number of excessively minute little rod-like structures, which, because they take dye more readily than the rest of the cell, are called " chromosomes," which means " colour-bodies." Each species has its own proper number of chromosomes—the human cell has sixteen. Such complete bi-polar cells grow by fission, like the amœba, when once they start to grow, and such cells are the starting-points of every living body. Your body began as such a bi-polar cell.

Now, ages and ages ago, when sex first appeared upon the earth, the cells proper to each form of creature that was to evolve and improve by means of sex were separated unequally into male and female cells.

How this change took place we do not know. *Why* it took place you will see as we go on.

One nucleus or pole in the cells which were to serve the purpose of continuing the species moved away from the other, and the cells split into two very unequal parts; the male part much the smaller and more active, and the female part much the larger and more quiescent. But though very unequal in size, each took one nucleus and half the total number of chromosomes. Before generation can take place, two such uni-polar cells must unite again to form a complete bi-polar cell with

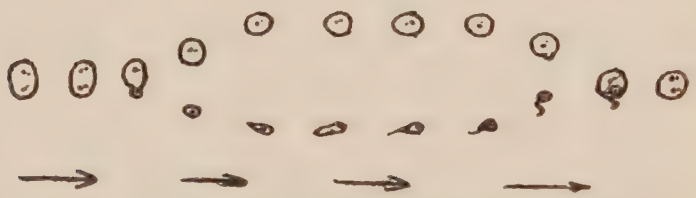

FIG. 9. DIAGRAM OF SEPARATION OF BI-POLAR CELL INTO MALE AND FEMALE CELLS, AND THEIR RE-UNION. THE ARROWS DO NOT SIGNIFY MOTION BUT SUCCESSIVE CHANGES.

two nuclei and the full number of chromosomes, able to divide by fission into equal bi-polar cells, and thus to grow into a new animal or plant. This is how all sex-generation takes place.

You may look upon an egg or a seed as being such a bi-polar cell. This is not quite accurate, but it is as near the truth as you could now understand. You may be able to grasp the manner of the separation of a bi-polar generative cell into male and female uni-polar cells by the diagram, which shows the successive stages in the development of such cells, and their re-union

to form the growing cell, which is the starting-point of a new being.

The cells on the lower side are the male cells, those on the upper are female cells. They differ entirely in shape. The male cells are like tiny little tadpoles with wriggling tails which propel them along: they are called "spermatozoa." The female cells are like very small eggs, in which the shell is replaced by a thin membrane. The human spermatozoon is about $\frac{1}{120}$ of an inch in length—too small to be seen except under the microscope. The human ovum is a nearly round cell about $\frac{1}{50}$ of an inch in diameter. The chief differences between the egg of a bird and the ovum of an animal whose young are born alive, are that the ovum of the mammal is very much smaller, that it has a membrane instead of a shell, and that it grows in the body of the mother instead of being hatched by her warmth.

Male cells are produced in great numbers in the adult bodies of male animals by means of special sex-organs. Similarly, the female organs produce ova. This is the essential difference which is called "Sex." When male and female animals are conjoined, the male seed, containing a swarm of spermatozoa, meets the ovum, or ova, in the womb of the female; the ovum throws up a small prominence at one point, receives a single spermatozoon only into its interior, and is then a perfect bi-polar cell, able to grow in the body of the mother into a new being; it is closed to all other spermatozoa—it has life, and it soon begins to grow and divide itself.

This growth proceeds in a very wonderful way. As soon as the ovum has become bi-polar by impregnation, it subdivides equally, after the manner of the amœba, and the new cells so formed arrange themselves into an outer skin-like layer, and an inner or lining layer. Folds in the outer layer are developed into eyes, ears, and mouth, and other organs and limbs of the embryo (as the growing creature in the womb is now called), while folds in the lining membrane form the heart and other internal organs.

3. The hatching of an egg.

The process has been closely studied in the hatching of an egg. By breaking open eggs after one, two, three, four, and following days of incubation, the successive steps in the development of the embryo can be actually seen. First appears a small line which is the future backbone and the great nerve which lies within it, and a few red branching threads, which are the future heart and blood-vessels. Step by step the separate organs are developed, until about the twenty-first day the complete chick which has grown out of the formless yolk, and has been nourished by the "white" of the egg, comes out into the world as a new creature, with sight and hearing, muscles and nerves, all complete. Nothing can be more wonderful and beautiful than this, and only dull hearts and brains will be unmoved by this daily miracle.

Hidden in that little ball of fluffy feathers are the still undeveloped characteristics of both father

and mother. It may grow into a game-cock or a "Cochin" hen, into a speckled "Plymouth Rock," or any other kind of fowl.

You should here recall the facts about the Mendelian series which you read about in Chapter III. From the facts that it had two parents, four grandparents, eight great-grandparents, and so on, you must see that the proportions of the qualities it inherits must be the reciprocals of the series

$$2 + 4 + 8 + 16 + 32 + \ldots\ldots = \infty \text{ *}$$

which would represent the whole chain of parentage if there were no common ancestors.

The series which represents the inherited qualities is therefore

$$\tfrac{1}{2} + \tfrac{1}{4} + \tfrac{1}{8} + \tfrac{1}{16} + \tfrac{1}{32} + \ldots = 1$$

The sum of this series is the inherited qualities of *one* chicken. This needs a bit of thinking to understand, but if you do think, you will see that it is necessarily true. Use your mathematics to enable you to understand this—it is for such understanding that mathematics are of use.

Now this is not nearly the whole story of the generation of animals. There is still hidden in our chicken the "tendency to vary" which we have already spoken of, and the power of adaptation to environment, and the beginnings of mental qualities, and a great deal more which would take us much too far to explain, would

* ∞ is the sign for "infinity," or any number too large to be defined.

The numbers in the series represent the totals *of the qualities* existent in each ancestor.

be quite above your comprehension, and soon bring me to the limit of mine. But thus much I think you can understand ; and now you know something of the mystery of sex in animals.

Human marriage represents all this, *and a very great deal more*: so much more that though the bodily relation is identical with the rest of the animal creation, all *that* is much less important than the relationship between husband and wife which makes a home and founds families, with their traditions of honour and achievement which go to make up civilized nations.

The progress of animals to higher forms is by the principle of the " Survival of the Fittest " ; the instrument and means of Evolution is Death.

The progress of Man is by the mutual co-operation for the good of all. Do not believe those who speak of the progress of Man being by the " Struggle for Existence," and the " Survival of the Fittest." This principle works out to death and destruction—to the application of every secret of Nature and ingenious invention to the horrors of war, the maiming and mangling of our fellow-men, the misery of women, ruined homes, orphaned children, and discord and hate. Those who speak thus are leaving out of account the greatest and most obvious facts of life—that Man is a living soul, and that happiness and perfection are found among those who conquer their lower impulses, who work and play with will and zest and intelligence, who help one another and love one another ; not among those who selfishly struggle for continual having and getting.

It is not by mutual conflict, but by mutual co-operation, that civilization is produced. Every profession contributes something to the general welfare—every man worth the name desires to do some sound work in the world.

There is a sense in which it is true that the fittest among men survive. Every race which has neglected the soul-qualities, which has given itself up to luxury and self-indulgence, laziness, cowardice, and self-pleasing has perished or is perishing, weeded out by the remorseless operation of the laws which make physical fitness follow on moral and spiritual fitness. Every race which lives for dominance shall be overthrown as Rome was overthrown. Conquest, subjection, discouragement, and pain are the means of extinction, and it is true that all liars and unclean persons shall come at last to the outer darkness, where is weeping for present degradation and gnashing of teeth for opportunities wasted. But never believe that the progress of mankind to higher forms can ever be but by the development of higher character. The instruments for the development of this higher character are Love and Pain. If immortal spirits will not learn by love, they must learn by pain. There is no third way. In human lives love and pain are blended till a perfected love casts out pain as it casts out fear.

4. Human marriage.

A mother's love begins in pain. For nine months she carried you within her. After much

discomfort cheerfully endured for your sake, and in much suffering, you were born. For all your early years she tended you and loved you, setting aside her own desires, sacrificing her leisure, giving up much of her pleasures for your good. Had she thought of her own enjoyments and self-pleasing, had she not given her time and love, you would not have had the health and strength that are yours to-day. Think of her disappointment if, after all this, her child turns out idle, lazy, dirty, untruthful—one who will never do any good in the world of men.

There are many references in the Bible to a mother's love, and her joy in carrying on the life of the world. Life and the nourishment of life are her kingdom. If you think of what your own mother has done for you, you cannot fail to perceive that you owe your health and your existence to her loving care.

I suppose that even a quite young child can realize something of the blessedness of love—what it is to have some one who is faithful to you whether you are right or wrong ; with whom you have no fear because all your shortcomings will be forgiven for love's sake. This, and much more, is the love between husband and wife—they will stand up for one another against all beside. Think what it is to have a friend who believes in you utterly, to whom you can be just yourself without shyness or fear or concealments, whom you love to be with night and day, for whom it is a pleasure to work and give your very best, whose smile and kiss are your best-prized rewards for duty done.

This is *human* marriage.

Some of you have read the essay "De Amicitiâ," in which an acute Roman lawyer gives his ideas on Friendship. In ancient classic times that idea was a high one. There is a famous story of two friends, Damon and Pythias, one of whom was condemned to death by Dionysius, the tyrant of Syracuse, in Sicily. I do not remember what Pythias had done—he had opposed Dionysius's Government, I think. He wanted to go to Greece to settle his affairs. Damon offered to take his place if Dionysius would give his friend leave of absence. Dionysius allowed Pythias to go, putting Damon in prison instead. Day after day passed and Pythias did not return, but Damon never for a moment doubted the honour and faithfulness of his friend. And the story goes, that on the very last day when Damon was to be led out to suffer in his friend's place, Pythias arrived, breathless with haste, to find his friend calm and smiling, and quite sure that if he had not come in time it could only be that he had met with some accident. You will be glad to hear that Dionysius forgave Pythias, and admired them both so much that he begged for the privilege of their friendship.

This anecdote illustrates what Cicero is at some pains to prove—that *true friendship can exist only between the good*. For bad and selfish men will always sacrifice a friend's interests to their own; they will ask of their friends what they would not give themselves; they will want to use their friends for profit or gain; to take and not to

give ; they will want their friends to do dishonourable things, to lie for them, or cheat for them, and such things kill friendship. Now Love, if it deserves the name at all, includes friendship like that of Damon and Pythias. It is all that and something more. Therefore it rests on goodness and nobility of heart. Faults and weaknesses can all be forgiven, but selfishness, deceit, and meannesses kill love. None can continue to love those who are false and untrustworthy, who are full of concealments and hidden shames. Those we live with day and night will see us exactly as we are, whether we wish it or not ; and this is the greatest of all joys or the worst of all pains, for there is no pain like having falsehood and meanness continually brought to light. False or mean persons, however they may fancy themselves "in love," soon come to hate one another. Keep yourself clean and true for the mate you will surely find some day if you bear in mind what real marriage is, and do not soil yourself with misuse of life's greatest secrets.

Those who are false and dirty-minded cannot be clean and true just when and to whom they wish. Dirty habits are not "natural" to the soul which governs the body, nor are they easily to be cast aside once they have been established. But it is easy not to begin them. You know that they are shameful. What would your mother and sisters think if they knew all the things that are done by boys? Put this to yourself if you are conscious of any hidden shame. The girl you marry will know. It is as easy for an idiot

to pretend to be sane as for a mean or false or foul-minded man to deceive his wife as to his real character. She *must* despise him. She may try not to, but she cannot help it in the long run.

5. Survival of the morally fittest.

And this is well. It is in the development of souls like the Survival of the Fittest in the animal world ; for temptations conquered make us strong.

As soon as boys feel these temptations they sort themselves into three classes:—

1. The manly, honourable boys who will have nothing to do with dirty words and deeds of any kind—who, when they feel tempted, think resolutely of something else, knowing that these are things which decent fellows don't do.

2. Those that are ashamed of them, but fall again and again ; make up their minds to give them up, but don't keep their good resolutions. Such boys get weak of will, wanting in force of character, and this tells in their acts of all kinds. As they grow up, they often cannot imagine why people think little of them, give no attention to their opinions, and consider them "third-raters" and "rotters." The true reason is the corroding influence always going on in their minds, which keeps them from acquiring the intellectual insight and the strength of will that command respect. The women they marry feel this, and after the illusion of being "in love" is over, they see them in their true colours ;

and love turns either to a sad tolerance and the sense of having to make the best of a failure, or to active dislike.

3. The third class are those who "give themselves up to work all uncleanness with greediness" (Ephes. iv. 17). They go from bad to worse, and make criminals and lunatics. The asylums have numbers of such.

This thing cannot be hidden for long—it writes its impress on face and form. The spirit makes the body in its own image. Every day you are making your own face and altering its expression. GOD is merciful, and this does not take place all at once; no single fault or few faults are written on the face. But in the end the sly, shifty eye, the slouching carriage of the body, the damp, awkward, clumsy hands, the poorly developed muscles, the shaky nerves, the liability to little ailments, tell their tale to every seeing eye.

6. A woman's rights.

Another thing about human marriage. Boys and men are apt to consider it entirely from their own point of view. But girls and women are half of the human race, and have equal rights with men. If you remember how vast is the work of women in making a civilization, you will perceive how important those rights are. A mother's province is the home—she is her husband's equal and partner, not his subject. She must have the wherewithal to make it bright, and to fill it with those things which belong to civilized life. It

is not her business to earn money; it is her business to spend it wisely, that the home may be beautiful, a haven of rest from the cares of life. Now, a woman gives deep love and lays aside her modesty, *for one only*. If she marries wrongly she makes her life's mistake—she cannot start afresh. Therefore it is her right that the man who offers love to her should be able to give her a home by his ability and industry. He cannot do this if he has been lazy and idle as a boy; he has no right to offer or to ask for love. One of the very meanest things a man can do is to take the love of a girl to whom he cannot give a home; it is only liars and cheats who take unselfish love and give nothing in return.

"It happens not seldom to a big boy or young man to play a most brutal part half in ignorance. He knows, that is, that he is doing wrong, but he does not realize the abominable cruelty of it. He takes advantage, perhaps not suspecting at first what he is about, of some poor girl, one of his father's servants, a shop-girl, or the daughter of working people in the village. When it is too late he finds that he has sacrificed the happiness of her whole life to his short pleasure. I think all boys ought to be given a distinct warning of this. You have, perhaps, read Smollett and Fielding, and gathered from them the notion that these things do not much matter. That view is the relic of a time when it was thought that women were inferior creatures, fit only to be men's toys and slaves. . . . But any one with a spark of generosity or the smallest love of justice must

find it revolting that in such cases nearly all the guilt is the man's, and nearly all the suffering falls to the woman. I hope it only needs that this monstrous state of things should be put before you to make you resolve that no woman shall ever pay, by misery, lasting perhaps a whole life, for having yielded to a temptation that came from you. A man at twenty has seldom grown out of gross selfishness ; but if he realizes the vast disproportion between his pleasure and the other's misery, he will perhaps abstain." [1] A girl who has lost her modesty has lost her "honour" ; and the loss of honour, whether to man or woman, is an irreparable blight on a life. If you have any honour yourself, you will detest the very idea of injuring the honour of another.

The essence of high character is unselfishness, and unselfishness is much the same for girls as for boys. Too much is made of the differences between them. If many homes are made unhappy by the unfaith, the selfishness, and the wilfulness of men, so they are also by the unfaith, the selfishness, and the wilfulness of women, though the one takes more often the forms of self-indulgence, arrogance, and carelessness, and the other of extravagance, deceit, and "temper." Equally with boys, girls should be brave, true, sensible, and persevering ; seeking to understand, aiming at being of use in the world. So only can they win lasting respect and affection.

In the long run, beauty is of expression. Many a woman speaks of "losing her beauty" as youth

[1] "Between Boy and Man," by Quilibet. (Watts & Co.).

passes away. In most cases that is not true—she never had it, but only the smooth skin and fresh colour which were its raw material. She also is daily making her face and form by her habits of mind. It was not old age that drew certain lines about her mouth and eyes, but hardness and selfishness and temper. The girl who loves knowledge, who takes wider interests than herself, her dress, and her wishes, who keeps her mind open to beautiful things and her heart young by sympathy and kind actions, who follows the progress of the world, and lives a refined, active, and unselfish life, develops an expression of face far dearer to the heart of her husband than any youthful prettiness, and is often as much admired in her age as in her youth. For him who loves her she never grows old, for the Heart of Love has eternal youth, however the body may fail and fade.

7. The way of honour and joy.

This is as true for girls as for boys and for boys as for girls. The chief difference that I can see is that the sins which are specially fatal to manly character are those which spring from lack of will power, lack of energy, and lack of determination ; while that which is specially fatal to womanly character is the self-centred vanity which misuses sex influence to gain perpetual admiration, and, in time, makes her incapable of unselfishness, and therefore incapable of love. Vanity and petty interests are the ruin of many girls' lives.

Whether you, young reader, are boy or girl, if

you would be known as a frank, brave, and open character, if you would be liked wherever you go, begin with the Boy Scouts' rule of doing at least one kind action daily. Recall to your mind in moments of leisure all the beautiful things you have seen, the interesting things you have known, the noble stories you have read. Do this especially when evil or selfish thoughts beset you, as they beset every one from time to time. So will you surely become high-minded, so will the expression of your face become comely, and so will the heart of your mate rejoice, finding endless novelty and delight in you. It is the absence of interests which causes dullness and satiety.

You *must* evolve and develop, whether you will or not : you cannot stop Evolution. It will take you either upwards or downwards. A soul *must* learn, whether in joy or pain. Take the road of Joy and Honour, the way of Truth, Cleanliness, Honesty, Industry, and Love. It is no question of not committing certain sins, but of actively doing each action of life in the right manner. This will lead you to happiness you can now barely guess at. GOD made us. He made us for happiness. He made men and women for each other, body as well as mind. He made each to be the complement and helper of the other. He means the upward progress of human Evolution to be by the way of Love and Joy. And in such love it is verified continually here and now, not only in the future life of the soul, that unselfish love and devotion, given and received, between true mates is just the very best delight that life has to offer,

the very music of the world. It is offered to all, and needs but a clean and honest life.

Will you make such sacred things the subject of dirty talk and vulgar jokes? Will you soil love—the most beautiful emotion the heart of man is capable of—with foul associations and disgusting acts? Will you by loose indulgence of your animal nature throw away a prize which beautifies all life, doubling its joys and halving its sorrows?

8. The answer to the mystery of sex.

Now, I think, you must have seen a part at least of the answer to the question, Why did GOD make Sex the foundation-fact of Evolution?

That men, who are necessarily dependent upon one another, and upon women, for all civilization, should have one other to live for, and should find that to live for another is the greatest of all joys ;

That children should have the kindly, gentle influence of home long after the time when their first helplessness is past ;

That the lessons of life might be learned in the dearest kind of companionship instead of in solitary trouble and pain.

There are still deeper truths than these involved in sex—truths which you would not yet understand—which have to do with the soul and its life. It is enough to say with the poet—

> We shape ourselves the joy or fear
> Of which the coming life is made
> And fill our future's atmosphere
> With sunshine or with shade.

When two persons love one another with the perfect love that casts out all meanness, and therefore all fear, with a love too strong for death or separation to change or alter, they become one in mind and feeling in a very peculiar way, and they know that GOD did not give love to take it away again. They come nearer to understanding the Eternal Mother-Love that broods over the world, amending all mistakes, forgiving all sins; slighted, forgotten, overlooked, but giving all good things without stint, bringing good out of evil, joy out of sorrow, and life out of death, and guiding wilful and wandering feet into the way of peace. They begin to see the wonder and the mystery of this Following Love, and to understand a part at least of the meaning of those deep words "GOD is Love."

That is the Mystery of Sex. And the key to that mystery lies in the words of the Lord of Life—

"Blessed are the pure in heart, for they shall see GOD."

CHAPTER VI

THE MYSTERY OF PAIN

And still we love the evil course
  And of the just complain;
We tread upon life's broken laws,
  And murmur at our self-inflicted pain.

1. Why was the world created?

THE question, For what purpose has the world been created? has been often asked. And not unreasonably. For though it would be unreasonable to suppose that we can understand the whole purpose of the Creative Mind which is obviously so far above our own and operates through ages and ages, it is quite clear that we must understand something of that purpose before we can joyfully and with goodwill fill our particular place in the general scheme.

The question has received very various answers, and some answer or other (usually unexpressed in words) underlies and prompts the conduct of every one. You must judge among these answers for yourself.

It is quite natural that some, looking at the beauty and the happiness of the wild creatures, should have answered that the world was created

for its own beauty and the happiness of its inhabitants—that it is a great garden, a Garden of Eden, which Man has to maintain in order and beauty, happy himself and surrounded by happy creatures. I don't say this is untrue ; for if we find the right way to happiness there is a sense in which it is quite true. But it is not in full accordance with the facts we see around us. It is true that the creatures are happy : there are among them no rich and no poor. All are beautiful of their kind. Among wild things all are healthy, all are obviously enjoying life. When you reflect that nearly all die what we should call violent deaths, by falling a prey to other animals, it seems as though they could hardly be very happy ! But every one who observes closely the habits of the wild things can see that they are.

Even a rabbit—that most timorous of creatures, cocking its ears in perpetual watchfulness, and never venturing far from its burrow—enjoys its life. Watch, from some hidden cover, the rabbits at play in a warren ; you will see that they are enjoying themselves thoroughly. Make a little noise and see them all scamper to their holes in alarm ; and then note how one little head after another comes out to see what it was all about.

We should not enjoy this. We should remember the friends who had been eaten and fear being devoured ourselves. Not so the rabbit ; it does not know any particular rabbit in the warren ; it does not miss the sister that the fox took last night or the mother who will go to-morrow. It does not know of its risks ; its avoidance of the

peril of the moment is instinctive and unconscious. It does not remember past dangers nor fear future ones. A hawk plunges down from the blue and takes a tiny bunny. A squeak, and all is over! Away scamper the survivors, and when the winged death has passed on the mother does not show that she even knows that there is one less to her brood. Thanks to the fact that the animals are not self-conscious, and that their feelings exactly respond to the actual external conditions of the moment, that they fear nothing that they do not actually see or hear, they live happy lives, and the pain of death is but an instant after months or years of free, joyous life.

Only the dog—the friend of man—and among dogs only the civilized dog, shows anything like real memory, the power of calling up the remembrance of an absent master. Most other actions are instinctive, and are less remembered than you remember the time you fell and grazed your knee last year.

For these reasons the constant death in Nature is not cruel. Hunting is not cruel. Shooting is not cruel, provided that a man be a sportsman and "kill his birds cleanly." To be a bungler with a gun, and leave wounded birds to creep away to die is cruel: to be a "sportsman" the gunner must kill his birds as Nature kills—swiftly and unerringly.

But such an answer to the WHY of the world —that it is to hunt and be hunted in, to eat and drink and find mates, rear young and enjoy life, and that is reason enough—is an animal's answer

Even the notion of the world as a garden with Man put in it to maintain it and dress it and be happy in it, is an answer of a somewhat similar kind. This is an allegory or parable of what the world ought to be, but even as a parable it can only be the true answer as long as man is, like the animals, living an instinctive life—sinless because unconscious of right and wrong—not knowing good or evil, or when he knows and chooses the good. As soon as he knows good and evil the world ceases to be a garden and becomes a place of struggle until Man willingly and consciously follows the Divine leading.

Man himself has given a quite different answer to the question. He says, The world was created for me—for my use and enjoyment.

Well, that is true also. Man *is* at the top of the animal scale ; he treats the ground as his own, ploughs and sows it, buys and sells it, plants what he will, cuts down the forests, destroys their game. He treats the wild things as his slaves, tames them and uses them or kills them, without any doubt that he is within his rights. Man *is* the master, and the world *was* in a sense made for him, because he is the last and most powerful of all the animals. This is the answer of the natural man—the answer of the dominating, selfish, ambitious, and capable mind. And this answer also is true as far as it goes.

2. The inequalities of the world.

But is it a full answer, or a satisfying answer? Look at facts. Have you ever seen an ugly, weakly

wild bird? No. But have you seen ugly, weakly boys and girls? Have you seen poor, wretched, deformed, miserable men and women? Are not really beautiful boys and girls exceptional? Have you been into a prison, a workhouse, a lunatic asylum, or a hospital? Probably not, which is perhaps a pity, for you cannot imagine these things without seeing them. But you should certainly go through some of the slums of our great towns and look carefully at the boys and girls you see there and contrast their lot with your own. You should think sometimes of how few chances of healthy, happy life those poor children have, and how difficult or impossible it is for them to grow into the strong, fair forms which the Creative Power would give them if its work were not marred by other influences.

You should see for yourself that whereas the instincts of animals lead them right and make an ordered world, there is something wrong with us men that leads us to gather and get without being satisfied, to enslave one another, to oppress one another ; and that while there is much happiness there is also much misery, much suffering, much sorrow, and much disease.

For these and other reasons—chiefly to protect himself against other men—there has always been an instinct among human beings to form " governments," to frame rules of conduct or " laws," and to enforce them by punishments. When we study the habits of savage tribes in Africa or Australia, we find that their tribal customs (which are tribal government) are mainly directed to keeping the

tribe together and getting it to act as one man in time of danger. So if we go to the other end of the scale of governments ; in all civilized lands you will find much the same intentions, together with a desire to raise the condition of the poor and needy, to heal the sick, to help the aged and infirm, to train the young, and give them the chance of leading healthy, happy lives.

And in this governments are moderately successful. A short five hundred years ago men had to attach themselves to the service of some powerful baron to get protection by the armed hand from violence and wrong. Now the law protects every man, hospitals are built for the sick, help is given to the aged, and schools are open to all.

And if governments were quite single-hearted in the desire to do even-handed justice, and aimed only at removing the causes of ill and replacing them by causes of good, they would be much more successful. But unhappily men too often love power, that they may feel themselves important and may compel others to do their bidding, and they misuse their power to gain money without earning it, and honours without deserving them. And so it comes about that governments, whether by kings, or nobles, or parliaments, or factions, have often been unjust, oppressive, corrupt, and bad. Even now vast sums which might and should be used to train skill, and to give to all the opportunities of honest work and healthy life, are spent in preparation for war—that terror which burns homes and turns whole families out to perish of cold and wet and hunger. Apart from the fright-

ful cruelties which German officers have inflicted on the hapless Belgians, even the most chivalrous war involves awful suffering and misery. And now every device of science is employed to mangle and maim the men of other nations, to drop petrol and explosives on the decks of ships and shrivel up the sailors in flames ; to blow great holes in ships below water and drown all their crews ; to poison soldiers with stifling gases. Are not these things devilish?

Why are they done?

Because men are led by their passions—the passion of ambition or love of power, the passion of greed for wealth or money, or the passion of hatred for those who think differently from themselves—and cannot be trusted to govern justly those with whose ideas they disagree. These have been the causes of war throughout all history, and their existence is still the reason why even those who feel the misery of war most deeply must stand armed and ready to lay down their lives in defence of their country against those who look upon war as an instrument of policy, and prepare to use it, not for defence, but whenever it seems likely to gain their own ends.

Sickness and crime, too, are common enough, and there are about three hundred thousand insane people in Great Britain to-day who cost as much to feed and maintain as the soldiers we need for our protection, not to speak of the sorrow to which insane or crippled members of a family give rise.

Man is not—as a whole—as free or as happy or as healthy as the wild creatures, for all that he

thinks the world made for him and given into his hands, and for all his governments and laws.

3. Why such misery?

Why, oh! why is there so much pain and sorrow?

Here is our question back in a more difficult form, and to this there can, I think, be only one answer. The animal world is healthy and happy because it follows exactly, however unconsciously, the direction of the Creative Will. For the animal is guided almost entirely by the unconscious mind which we call "Instinct." So are human beings in a great many unconscious actions; but in all things which we do consciously we are aware that we have a choice between a right and a wrong way of doing them.

Now if you will think a little you will see that we are all dependent on each other. You are dependent on your father and mother, not only for your existence, but for your food, your clothing, and your education. You are dependent for your leisure and playtime on those who do the housework—for if you had to tidy your own room, cook your own food, and mend your own clothes you would have time for nothing else; on your teachers that they know what and how to teach; on the honesty of the tradesmen who supply your food; on the skill of the doctor who treats you when ill; on the government under which you live for protection and defence.

There is not a single act which any of us do which does not in some way react on others. If a

boy, for instance, is persistently idle, he not only injures his own future but that of the wife and family he may some day have. Not only so, but his refusal to learn kills the interest of his teacher and makes that teacher's duty distasteful and difficult. If many boys in a class are idle a master gets tired, and his teaching gets dull, and the time of the class is wasted. All suffer, the clever with the stupid.

We human beings are the " cells " of the nation of the " body politic " ; and just as in the physical body there are brain-cells, nerve-cells, eye-cells, muscle-cells, bone-cells—hundreds of different sorts —so the nation is composed of men and women who fill hundreds of different functions, all of which are necessary to a civilized country. The more cells there are that are healthy and doing their work in the body, the healthier it is ; the more there are that are weakly or diseased, the worse is the general health and the more pain it suffers. It is exactly the same in the nation ; the more of competent and honest people there are in a nation, each doing sound work in his or her own place, the healthier and happier that nation will be.

There are three typical feelings whose misuse tends to ruin the physical, mental, and moral health of each person, and therefore to bring pain to the whole nation. They are called the Desire of the Flesh, the Desire of the Eyes, and the Pride of Life. Nearly all the evils and nearly all the pain in the world spring from the misuse of these feelings which are natural to us all, and rightly

used, are the means of our ascent—misuse of bodily appetite (food, drink, and sex) ; misuse of understanding (that it is not what he HAS, but what he IS, that makes a great man) ; and the misuse of Will, which desires its own way and will take any means to get it, right or wrong.

It is quite obvious that if an immortal soul (as you are in your real self) is to improve, it can only be by getting conscious goodwill. If such a soul shuts itself to the voice of reason and conscience (as many boys and girls do), there is nothing for it but to learn by the bitter experience of the consequences which follow on the misuse of its powers, and on its blind ignorance of its true functions.

4. The use of pain.

Death is the instrument of Evolution in the animal world. No attempt is made to build up the weak—they are ruthlessly destroyed. If men were merely more highly developed animals the same plan might be followed. But as we are really undying souls living in animal bodies, if we will not learn from the love of what is true and beautiful, if we will not remember that our acts will influence the destinies of others, if we will not try to do our duty, then we must learn by pain. There is no other way by which we can learn that souls as well as bodies have their laws of health and beauty, that to live within those laws means health and happiness, and to go against them means sorrow and pain.

People used to think that GOD sent famine,

plague, lightning and tempest, earthquakes, and other misfortunes as punishments for sins. Whether that is ever the case I do not know, but I think not ; and we can all, if we follow up causes, see quite clearly that most pain is the direct consequence of our own or some one else's wrong-doing or ignorance.

The misuse of the desire of the flesh punishes itself. Those who over-eat and think too much of their food get their digestions out of order, and have to go to this or that expensive " cure," when all the time they might have perfect health if they would only eat less and work more. They get fat and flabby, indolent and " delicate," liable to all sorts of ailments ; and as the body repeats to the outward eye what the soul is in itself, they get also a weak, heavy expression of face.

The misuse of drink comes less your way, but I suppose you are not ignorant that there are many men who waste on beer or spirits or wine the money which is required for the maintenance of their families, which would give them intelligent and healthful pleasures, such as travel and sport. Good wine should be an occasional treat for times of festivity, and alcohol should be very sparingly used in daily life, if at all. But some men and women get a craving for it ; they feel " down " and " want a little stimulant," so instead of taking the needful rest and the resolute action which would make them well again, they take " nips " of liquor, which for a short time quicken the action of the heart. But alcohol is not food, and reaction from it causes more " feeling low," and

so the craving is set up, and the man or woman gets into the grip of a habit which weakens the will, undermines the intellect, and destroys the health. A whole train of pains and diseases follows from these two causes.

Misuse of sex is more common still, and often begins almost unconsciously by a young child playing and fingering itself. This reacts on the very delicate and sensitive nerves of those parts in a way which I think you can understand if you try to. Any effort of the mind centres the consciousness in the group of nerves employed for the thought or action. For the time being the consciousness resides in them, the increased nerve-flow heightens that consciousness, habit fixes it and causes local development. This is true of the athlete, the hand worker, the literary man, and of every form of bodily and mental activity. Practice makes perfect in this way and no other.

Frequent sex-consciousness concentrates attention on those nerves, and causes irritation and uneasiness, due to the increased blood and nerve-flow. This more than anything else is the sowing to the flesh which reaps corruption, while all attention given to beautiful things, to true things, and to noble things is the sowing to the spirit which reaps eternal life, not by way of reward but by sure consequence, because the one development is towards the perishable and the other towards the enduring. And this is so because soul-facts and body-facts are not contrary one to another in their consequences, but are essentially one ; the Kingdom of GOD is not divided against

itself, and He made the world of matter as well as the world of soul.

Such misuse of the body has far-reaching effects on the mind. Boys and girls whose thoughts are perpetually running on sex matters become limited in mind to a quite unusual degree. Their private talk all runs on this one subject, and they dwell on it with weary and often disgusting repetition. It dulls their minds and blunts their emotions, so that they no longer care for true things nor take pleasure in beautiful ones. A liking for coarse and unclean words and acts, disregard of modesty and self-respect, lead to more and more of such acts ; and a mind full of such thoughts can no more receive intelligent, rational thoughts than a cup full of muddy water can be filled with clean—the dirty stuff must be thrown out first. Many a boy fills his mind with dirt of this description and goes on till he finds too late that he has thrown away all his opportunities of preparing himself to take a good place in the world. All the pain and disgrace of failure is the direct consequence of his own acts and disregard of all he might have learned. I cannot here tell you a hundredth part of the deep unhappiness which the misuse of sex inflicts upon mankind. But if you have understood what has been written in Chapter V you can see for yourself how terrible are the consequences of that misuse of the beautiful facts on which GOD has seen fit to found all Evolution.

5. Most pain comes from broken laws.

The Desire of the Eyes is the illusion of the

understanding as to what is really worth having. Not what a man HAS, but what he IS, makes true greatness.

This truth our understanding would show each of us, if we were not misled by the desire of the eyes. This term seems a curious one to use, but if you will think awhile you will see that it is a very true expression. Mere "having" is of no particular value to you ; it is only worth while to have things that you can USE. Boys and girls, I am glad to say, are as a rule more sensible than men and women in this matter : they very seldom hoard up and burden themselves with all kinds of possessions which they cannot use. Their mistake is usually the opposite one of carelessness and waste. But when you are older you will see that the desire of having heaps and heaps of things which after all a man can only *look at*, is responsible for a great deal of injustice, and therefore for a great deal of pain. Grand houses, fine clothes, elaborate furniture, jewellery ornaments, do not serve any real purposes other than might be served by the simplest and plainest. It is a matter of display. In the great world many people suffer much from the injustice which tries by all sorts of crooked means to gather and get more and more money, more and more luxuries, without really earning them.

This makes employers to underpay their workpeople, and the workpeople to aim at doing as little as possible in return. The employer tries to get good work without paying its fair price, and the workman tries to get good pay without

giving its full equivalent in good work. Trade disputes and bitter quarrels result, with much sorrow and unhappiness and pain. Sometimes tremendous disasters follow. For instance: Modern explosives require extremely careful washing to free them from the acid used in making them. If this is not thoroughly done, they heat when stored, the heat increases their chemical affinities, and they explode of themselves. Some years ago a French battleship's magazines took fire in this way and in a few seconds the ship was reduced to a mass of wreckage and her crew of three hundred men were nearly all killed. This was almost surely due to the shirking of their duty by some careless workmen, and the analyst who should have tested each batch of explosive that left the works took for granted the very thing he was there to test. All the sorrow and pain of lost husbands and fathers came from the careless shirking of duty, probably due to trade disputes.

No one knows what the results of carelessness and laziness may be. A careless student often causes grievous pain and trouble by incompetence as a doctor or engineer, perhaps years afterwards. Even in such things as false excuses a boy often injures his fellows: for a master who has had false excuses made to him many times comes to disbelieve real ones, and the boy who is disbelieved feels aggrieved and injured, never reflecting that if he and others had always spoken the truth no one would distrust him.

The many sufferings that result from bad work have shown people that such pain can be avoided

only by doing to others as we would be done by, and by the desire to fill well some place in the world. I have often heard boys say that they don't know what they would like to be, but want a life which will give them "a good time and no fag." Now if you think about it you will see that this is simply a wish to get without giving in return. A "good time" means good pay, and good pay has to be earned, and you cannot earn it without taking trouble and knowing your job, and for this we must all train our minds as well as our bodies, not minding the necessary "fag." Otherwise we are just asking for pain.

Last comes the Pride of Life. We all like to be strong, we all like to have authority, we all like praise: and it is quite right that we should. But this also has to be earned; and when it has been earned comes the temptation to dominate others, to be overbearing, self-willed, and arbitrary. This also is the root of much injustice, much unfairness, which brings bitterness and pain. One of the great lessons of History is that power misused leads to great hatreds and savage wars.

Abuse of authority, whether by a man or a party, is the most fertile cause of quarrels in the world. The principle of law is JUSTICE—the perception of Right by human minds. The perfect Truth and the perfect Right exist in GOD—they are independent of anything that men may think, but they are the conditions of growth of human souls and human happiness. Law arises from the perception of right which is common to a majority at any given place and time. But

majorities cannot make wrong into right ; laws must be Just if they are to endure. And small minds or ambitious minds cannot grasp this fact —they want to assert themselves regardless of the fact that no one is so entirely and absolutely right that he should be despotic. We must know when to give way to others, and when we must stand firm for what we know to be wise, and be ready to endure any hardships rather than give in. And we may generally decide without error if we stand for the interests of others and give way on our own.

All the worst pains of the world would be avoided by the wise direction and control of these three great groups of feeling. Courage, self-restraint, and kindliness are the way of Wisdom which avoids pain.

6. Pain as the origin of science.

But there is yet another part which pain has to play which is inseparable from bodily life : it is the origin of Heroism. Without pain there could be no heroism.

It is also the origin of science. If we all loved to learn, we should not need pain to develop our characters. Ask yourself whether you wish to learn for the sake of knowing, without fear of the consequences of idleness and ignorance. If you can say " Yes," you are already far on the way to wisdom. But it is an unfortunate fact that, till a man reaches a certain degree of development, he cares for nothing as long as he is comfortable. The savage tribe begins by seeking

charms to bless crops, to cure disease, to curse its enemies. Little by little they come to learn the causes of things, and the sciences of Agriculture, Medicine, and War arise. As they become civilized, their standard of cleanliness and comfort improves, and they wish to avoid the pains of poverty, and to procure more comfort and satisfaction ; they separate different sets of causes in their minds, and the sciences of Engineering and Physics come into being. Later still men begin to take delight in discovering the operations of Nature, and thus begins the real Science which desires knowledge for its own sake, and is willing to endure hardships to win it.

Faraday, the blacksmith's boy, reading for pleasure, after his work was done, by the light of the candle-ends he saved, becomes the Royal Society lecturer, who discovered the principle of the dynamo, from which arose all the great benefits of modern electrical engineering which employs thousands of people healthily and makes the wealth of whole nations, like Switzerland and Norway. Some one pointed out to him that he might make a great fortune if he would give up research and work at improving his discovery and patent his inventions. "Oh ! I have no time for that sort of thing," said that truly great man. This is the true scientific temper—a man content with his position and rejoicing in his work.

But it is not the temper of most of us. After we have won our position and our livelihood, too often we seek our own glory and our own gratification, without care for justice or mercy or truth:

Before we have won it we seek to cut off results from their causes, and to have wealth without productive work, health without self-restraint, honours without loyalty, and happiness without desert.

7. The law of consequence.

Our self-conscious will must agree with the Divine Spirit which fills the physical world before the world of men can present the same spectacle of ordered happiness as the world of Nature. And the self-conscious will in each of us must do this *freely*. We have the power of choice between good and evil ; but we have not the power of defeating the Omnipotent Creative Mind. That Mind moves to its purposes unhasting and unresting. It works by the Law of Consequence. Just as the laws of gravity and affinities are inherent in the atoms, so are the laws of right and wrong inherent in human minds, and right and wrong are known by their fruits of happiness and pain. We can only delay its purposes *to ourselves*. We can make the way long and hard to ourselves, but we cannot alter the Evolution of Spirit. Death is the instrument of Evolution in the animal world —the weak and the incompetent fall victims to their foes. Pain would teach them little, therefore pain is little used. It is otherwise with man, who can remember and record results. This record of results is the means of his progress. All History and all Science are but the record of the real experiences of men.

But the process of learning by pain is a long one. Empire after empire has grown up and

fallen by the same causes. Look at Rameses in his chariot driving over his foes and receiving their severed hands—the king drawn ten times as large as his enemies, to symbolize his greatness—himself the symbol of wanton conquest. Alexander carried the Greek arms from Macedon to the Ganges, making all nations the servants to his pride. The Roman patrician filled his household with slaves, white slaves, Greek, and Gallic, and British. These not only cultivated his fields and ministered to his pleasures, but managed his farms, sold the produce, and were traders, manufacturers, and even physicians, all giving their earnings or the greater part of their earnings to him. The Roman saw plainly enough that the fall of Greece was due to low character, but he failed to perceive that this loss of character was due to slavery and self-indulgence.[1]

One more lesson of the Law of Consequence was given to the world, and Rome—full of nobles who lived in indolence, and of a people who lived for pleasure—mistress of the wealth of the world, sated with gold, and silver, and corn, and wine, and silk, and slaves, and souls of men, fell before the swords of the great free peoples from the North, who in their turn repeated the story of valour, plunder, degeneracy, and decay—the long, long way of pain traversed by those who do not listen to the voice of Reason and Conscience.

[1] It was not till Abraham Lincoln said that, in the long run, slavery was worse for the masters than for the slaves, that men realized that the indolence of the master is an even greater injury to him than the loss of liberty to the slave.

I think that quite the saddest fact about human nature is that most of us, as soon as we are successful and happy, show a hard indifference to the troubles of those who are less fortunate, and thus show that we can learn sympathy only by suffering. When the iron has entered into our own souls, then we begin to care for others. Why not do it without the pain?

In this world no one can avoid pain altogether, though right conduct can greatly lessen it. You do not really know this yet, because your parents and teachers stand between you and the pains that would follow on your mistakes. Such pain as they inflict is little indeed, and high-spirited and manly boys know this very well.

8. Pain develops character.

But some pain you are sure to have, for no character can be completed without it. You may have to endure sickness, you may have to bear up against failure, you may be the victim of misfortune or ill-will. More likely you will suffer from the consequences of your own errors. When any of these overtake you, pause and reflect what is the real cause of your pain. You will generally find that it is either the consequence of some law broken by your own act, knowingly, or it may be unknowingly ; or that it is some defect in your own character which that pain, rightly used, would rectify. And if you cannot see its origin in any negligence or ignorance of your own, take it as a means of courage, of endurance, of fortitude. "As the gold is tried by fire, so the heart is

tried by pain." And if you see clearly that you suffer by the *unprovoked* ill-will of others (which will very rarely be the case), remember that your pain proceeds from the salutary fact that all Humanity is one, and if one member suffer all the others suffer with it. If it were otherwise we should be detached atoms and not a body. National development would be impossible, for national growth depends on co-operation, and co-operation on mutual goodwill. It is by learning that the consequences of our acts must inevitably extend far beyond ourselves that we acquire the temper that foresees, and forgives, and works towards the greatest results. "Get into the way of feeling for other people's troubles, and doing what you can to help them away, and you may live to ninety if you can, and will never find the world a bit too weary for you." May you have little of sickness, or failure, or ill-will to bear! but in all that does come to you remember how those that have gone before you have borne sorrow and pain. There will nothing "overtake you but such as is common to man; and GOD is faithful who will not suffer you to be tried above that you are able, but will, with the trial, make a way of escape that you may be able to bear it."

But whatever trials you may escape, the time will certainly come when you stand by the lifeless form of some dear one and look on the lips that spoke love, and the hand, always so ready to help, now cold in death. When that pain goes through you like a sword let its wound not be poisoned by the thought that you did not give

of your best while you could—that you returned wilfulness and indifference for the love and thoughtfulness you received. For, believe me, the pain of death and separation is light to those who love, and know they will meet again, compared with the bitterness of remorse for ingratitude that can never be atoned for, wasted opportunities that will never come back, and slighted love that can never be repaid. "Too many wait until those they love are dead, and then bring their alabaster boxes of affection and break them. They keep silent about their love when words would mean so much, would give such cheer, encouragement, and hope, and then when the friend lies in the coffin, their lips are unsealed and speak out their glowing tribute on ears that heed not the laggard praise." "Many persons go through life struggling bravely with difficulty, temptation, and hardship, carrying burdens too heavy for them, pouring out their love in unselfish serving of others, and yet are scarcely ever cheered by a word of approval or the delicate tenderness of friendship ; then when they lie silent in death, a whole circle of admiring friends gather to do them honour." See to it that you give your mother's heart that solace of love which makes her trials light. Give while you can, and give your best, so will your pain be less in the day of *your* trial. This lessening of pain will come about without your thinking of it ; for it is, happily, impossible to be generous from the cowardly motive of avoiding pain. But it is a fact that the more generous and the more kindly you are, the less you will make others suffer,

and the less you will suffer yourself. Nine-tenths of our sorrows we make for ourselves and for each other, and when those pains which come from ignorance, from selfishness, and from misdoing cease by reason of those faults being changed into wisdom, affection, and right action, there will remain only the causes of pain inseparable from physical life in a material world, where storm and accident, decay and death must prevail.

From these there is deliverance in that City of GOD into which each nation shall bring its glory and honour, its art, and its ideals, but not in anywise anything that is unclean or he that maketh a lie (Rev. xxi. 24-27). And when the King of Love shall reign in His glory, "none shall hurt or destroy in all His holy mountain," and *therefore* GOD shall wipe away all tears and all sorrow; and *because* death shall be no more, as physical accident cannot touch an immortal spirit, *therefore*, under the Law of strict Consequence, shall the promise be fulfilled :—

> "And there shall be no more death, nor sorrow, nor sighing, *neither shall there be any more pain*, for the former things are passed away."

CHAPTER VII

THE REVELATION OF GOD

Seek not death in the error of your life: and draw not upon yourselves destruction with the works of your hands.

For GOD made not death: neither hath He pleasure in the destruction of the living.

For He created all things that they might have their being: and the generations of the world were healthful: there is no poison of destruction in them, nor the kingdom of death upon earth.

For righteousness is immortal.

WISDOM OF SOLOMON i. 13, 15.

1. The way of the revealed will of God.

DOES not the Creative Power provide any shorter way than Pain whereby free souls may rise to better things? If that Power is GOD, and GOD is Love, is there no way but the slow lessons of pain and the neglected lessons of History for us to learn the laws of consequences under which we may become strong and brave and free?

Assuredly there is: it is the Revelation of GOD.

This revelation is given in the form of a story—the story of the thoughts and legends of a race: how its best men always perceived that the only rational explanation of the world is that there is

a great hidden purpose in it, and that all riches, all power, all mind, and all Intelligence are of great value when they are put to righteous uses, but are poison and evil when used for selfish enjoyment only.

These righteous uses were by Moses and the Prophets, called "the Service of GOD."

2. This is according to law.

To "serve GOD with all the heart and all the mind and all the strength," means to see that there is only one thing worth living for—the laws which make a beautiful and orderly society, happy because free, and free because trustworthy.

No scientific man wishes to be free from the laws of Nature; he does not wish to be able to build in defiance of the law of gravity, nor to send electrical power along string instead of wire. He finds pleasure through his intelligence in discovering the laws of Nature and through his skill in directing them. No athlete rebels against the rules of the game—to play the game is no interference with true freedom. So it is with the truly wise man. He desires to use the power of wealth and the energies of Nature and of mankind for the greatest of all ends—to help to fashion a beautiful and orderly world. He knows that the only way to this end is to have orderly and beautiful souls, beginning with his own. He knows that the laws of GOD and no others will produce such souls, and therefore those laws are a delight to him and the truest freedom. So the "Service of GOD" means to him much as "the Service" means

to a good soldier. It is a title of honour, it is that liberty within the law which makes a ship, a regiment, or a school a society of happy comrades. It means also the love of all that is beautiful in Nature and in Art ; of all that is true in Science and Religion ; of all that is good—the self-discipline that tends to strength and power, the intelligence which sees the hidden causes of things, the unselfish love which is the greatest and truest and most beautiful thing in the world. And it means, too, a personal love for the Great Spirit that made all these things, who leads us to understanding and guides our steps, who though He fills heaven and earth will yet give to each one of us private personal help, just as the vast sun is not too great to help individual daisies to grow. This is what is meant by the love and worship of GOD as a Person.

This revelation was given to the minds of those who followed His guidance. The words in which they have told their experiences, the songs of praise, the answers to prayer, the chronicles of the results of obedience and disobedience to Law, the warnings of the Prophets, the story of the earth-life of Him who is the Light of the World ; the letters of those who taught in His name, all have been recorded in one volume which is rightly called the Word of GOD—His message to mankind.

3. The Bible story is difficult to believe.

When I was a boy I was taught that this message was dictated in GOD'S own words, and

therefore that every word of the Bible was exactly true. When I grew older I saw that this could not be so, for all its statements do not agree: e.g. St. John says, "*No man hath seen* GOD *at any time*" (1 John iv. 12), and in Exod. xxiv. 9 it is said of the Hebrew elders that "*they saw the* GOD *of Israel.*" There are many other things that cannot be literally true—the stories of the Garden of Eden, one of whose four rivers is the Euphrates; the Deluge; the Tower of Babel; the miracles of Joshua and of Jonah; and others which need not be mentioned in detail. And I now say, more confidently, that these are not literally true, for when I was a boy I just felt that things could not have happened in that way (which was, of course, mere opinion, and of no value whatever), but now I know that they contradict known facts and laws of Nature which are the expression of the will of that GOD who changeth not.

As a boy I doubted them, as hundreds of boys do, and said so. I was told, "It is wrong to reason about these things; they are above reason. GOD can do what He wills. You are no judge of what is possible"; and I found that I deeply grieved my mother by what I said. So I learned to be silent, and because of the contradictions I carelessly passed by all the beautiful stories where there is no contradiction, and all the meaning which one generation after another finds to be true. I put the whole from me for many years. The Bible meant nothing to me. I forgot its existence; I never opened it; or if I thought of it at all it seemed

to me a mystery which no one could really understand, though some might pretend to do so.

Now, it is a mystery, but not a hard one, and I hope that my mistakes and errors may be of some use to you if I tell you how the mystery was solved to me, and to scholars and students much wiser than I, of whose work I was then ignorant. You must judge for yourself if what I tell you suits your mind. These things are not like grammar or mathematics, where one can teach what is completely and exactly true, and all learners must think and see alike if they see at all. Every one must use his or her own mind, just as we must use our own eyes if we would see our way. I say again, It is not your *duty* to come to any conclusions about the Bible—it is your duty to be clean, and truthful, and honest, and industrious. Keep to those four things, and place reliance on GOD'S help to keep you in them, and you will have done your duty. You need not trouble about anything that does not interest you. Perhaps if you are not interested now you will be when you are older ; but if you have read thus far I think you will find this chapter helpful to clear your ideas about matters which really are important, because it is always better to do right from reason and knowledge than blindly. And as each one of us has to develop the same kind of right thinking, the same perception that GOD really IS —that He is not to be coaxed and persuaded into granting prayer as if he were a kind of magnified man—this record of the growth of a special nation is the best of all guides

till we ourselves come to the point at which we can hear the same Spirit of GOD speaking in our hearts.

The Bible is the guide to conduct because it is the guide to right thinking. It is the history of the progress of the Jewish nation from human sacrifices to the Golden Rule—"Thou shalt love the Lord thy GOD with all thine heart and thy neighbour as thyself." It is the story of Man coming to see more and more clearly what GOD is like.

4. The Bible story is a drama.

That is what is meant when it is said to be the story of spiritual evolution.

That is given as a story, a drama—the drama of the Hebrew race, not as a doctrine or an argument. This drama covers six thousand years. A very great deal is of course left out. Only selected lives are taken, and only a few events in those lives. Those events are all chosen for their moral meanings; very little is said about the rise of the powerful Babylonian Empire and nothing about all the great world-history that Xerxes was making when the Book of Esther was written; while the warnings of an obscure vine-dresser like Amos have a whole "book" to themselves. The speeches in many cases are not the actual words spoken, but those which convey the chief meaning of the life of which they are a part.

Now I am going to try to explain to you how this way of writing is much truer than a phono-

graph record. There are three kinds of truth, corresponding to body, mind, and soul.

1. Truth of Fact. You did or did not do such and such a thing. You were or were not in such and such a place yesterday. The magnet attracts iron. Christopher Wren designed St. Paul's Cathedral. These are facts. To deny any facts that you know is to tell lies.

2. Truth of Inference. These are truths which are established by reasoning. All the truths of mathematics and all laws of Nature are truths of this kind. They are founded on facts and explain facts, but they are themselves "inferences," or conclusions of Reason. Contradictions of such truths are errors, mistakes, bad reasoning ; but not lies.

3. Dramatic Truth, by which the soul is taught as in a flash to see what mere reasoning could not present. A statue, a picture, a poem, or a play can show you truths dealing with right and wrong which might take long and wearisome argument, or could not be so shown at all.

Contradictions of dramatic truth are what is called "false art," leading astray from truth. For instance, the plays which represent Jeanne d'Arc —the heroine and saint of France, who lifted her country from servitude—as a vulgar witch, are falsehoods which strike deeper than any mere lies about her could do.

Turn to Shakespeare's plays and read the speech of King Henry V to his soldiers before Agincourt, or Mark Antony's speech to the Romans after

the assassination of Cæsar, or Cardinal Wolsey's speech when, wearied out and disappointed, he thinks of his ruined life and fall from power :—

> Cromwell, I charge thee, fling away ambition ;
> By that sin fell the angels ; how can man then,
> The image of His maker, hope to win by't ?
> Love thyself last : cherish those hearts that hate thee ;
> Corruption wins not more than honesty.
> Still in thy right hand carry gentle peace,
> To silence envious tongues. Be just and fear not.
> . . . O Cromwell, Cromwell,
> Had I but served my God with half the zeal
> I served my King, He would not in mine age
> Have left me naked to mine enemies.

Now, Wolsey really seems to have said the last sentence in those words, but he certainly did not say all that is set down, though what is set down gives a true idea of what he was feeling. In all Shakespeare's plays there is much that is real history, much more that is dramatically true, and some few things (such as the character of Jeanne d'Arc) that is dramatically as well as historically false.

This way of expressing deep truths by fictitious speeches is called "dramatic truth."

The Bible is written with dramatic truth. It gives the story of the Hebrews in language fitted alike to the poor and uneducated, to the man of science, to the scholar, to the European, and to the Asiatic.

It covers an enormous length of time. It would have been impossible to have recorded anything like the whole story. Much is left out, and probably very few of the events took place exactly

as they are told. Even the words of our dear Lord JESUS CHRIST, who is our living King, were probably spoken in Aramaic. Many years later they were translated into Greek from the memory of those who had heard them. Later still they were translated into Latin. Hundreds of years later the Latin and the Greek versions were translated into English.

The Old Testament has gone through still greater changes from the original form of the legends.

But the Spirit of the Bible is the truest thing in the world except GOD'S living guidance in our hearts.

The Old Testament is legend mixed with history —not the history of the whole world, but of the Hebrew race, through whom (as a matter of fact) we received our religion. The Lord JESUS CHRIST was born of the race of David, St. Paul and the other Apostles were Jews, and they took the Old Testament as the original Bible, to which their own writings were afterwards added. So it is historically true that GOD did "choose" the Hebrew race to be His messengers.

But Hebrew history is told as a drama, and the drama fits our own souls because they were men like ourselves, with the same passions, the same temptations, and the same trials to go through. Moses showed them the same two ways that are offered to us—the way of Love and Joy, the way of sorrow and pain, of blessing and cursing, of life and death, as you may see for yourselves in the twenty-eighth chapter of Deuteronomy.

Now I was not told all this. When I read of GOD talking with Abraham or Moses, and burning up rebels, or sending fiery serpents among them, I thought these legends were meant to be exact history, and it seemed to me that this stern Leader who sent fire and pestilence when disobeyed might be very much feared but could hardly be loved, and I felt somehow that GOD walking and talking as a man with men *could* not be literally true. That it is so put that the simple and ignorant might understand that a guidance that is *really* given in the silence of the heart is as true as in a face-to-face talk I had no idea. I did not see that a myth, or legend, or even a quite imaginary story, may express dramatically the fact that GOD does really visit heavy penalties on wilful wrong-doing because in no other way can the careless and self-willed be led to see truly and feel rightly.

5. What is meant by "legend."

Before I go farther I wish you to understand just what is meant by a "myth" or "legend." When the Greek sailors went through the Straits of Gibraltar, they called the high mountains on either side, the Pillars of Hercules. They thought they had reached the outermost rim of the earth; beyond lay the Ocean which encircled the world. They saw the clouds resting on the mountain top, and they really thought that the mountain held the heavens and the earth apart, here at the edge of the world. They came back and said so. Then the poets dramatized the story and called the Atlas mountain "the weary Titan,"

holding the sky and the earth apart ; and you may read in Kingsley's "Greek Heroes" how he prayed Perseus to be shown the Gorgon's head that he might be turned to stone and at last have rest. This is a legend without any religious meaning, but it is an excellent example of how myths and legends grow. There is always a meaning and always a kernel of fact if we could get at it. Some meanings are very obscure—the original fact is too deep buried to be got at—but the meaning of the legends of the Bible is always clear. It is always that Right Doing is the one way of growth, of Power, and of Joy—the joy that none can take away—the way of the Life Eternal, which is no dream of harps and crowns, but the action of the strong, free, brave spirit which arises from the dead flesh to living, growing life. If we see the meaning of any legend, the exact method of its growth is not of any great importance.

6. Bible history.

We can now go on to the outline of the Bible story. Later I shall try to tell you how the different "books" were put together.

The most permanent influences on the Western world came from three cities—Athens gave it Art ; Rome gave it Law and Discipline ; Jerusalem gave it Religion. To the Hebrew race belongs this great distinction. Their history and prophecy extend from about 2000 B.C. to the present day, and beyond it. Other races have passed away, but the Jewish race—a people without a country —still remains distinct in all lands, a standing

witness to the truth of prophecy which no man can deny. That history you must have before you in a clear form if you are to understand it. I therefore ask you to follow carefully the chronological sequence of the paragraphs which here follow.

I. THE PATRIARCHAL PERIOD OF THE HEBREW RACE; FROM ABOUT 2000 B.C. TO ABOUT 1300 B.C.

The earliest civilization of which we have distinct records began in Chaldea. This was a Mongol kingdom, and built great cities, such as Calneh, Ur, and Accad, long before the time of Abraham. The country was the meeting-place of two great races—the Mongolian and the Semitic. A dual monarchy arose, and all the conflicts which naturally result. Abraham was a Semite. He lived far from all this political life, the son of a simple village headman in one of the mud-built villages which may still be seen in the plains of the country "between the rivers" Tigris and Euphrates—Mesopotamia. What Kipling wrote of the Indian peasants in 1894 might have been written of Abraham's father, Terah:—

Our kings and our queens are afar.
  On their peoples be peace!
God bringeth the rain to the bar,
  That the cattle increase.
And the peasant settled the share
  More deep in the grudging clod.
For he saith: "The wheat and the cattle
    are all my care,
And the rest is the Will of God."

To Abraham came a vision of the night which he felt to be a message from GOD (Gen. xii. 1-9; xv. 1-21; xvii. 1-14). This message had three parts:—

I am the Lord thy GOD, walk thou before Me and be perfect:
Go forth into the land that I shall show thee, and I will make of thee a great nation.
In thee shall all nations of the earth be blessed.

The legend says that this vision was repeated three times.

Much courage and trust in its verity was required to obey it. Then, as now, the man who should actually leave his father's house, his settled prospects, and wander forth into a strange land in obedience to an inward command, would be blamed and ridiculed. Visions might be talked about and wondered at, but *acted on*! No! But Abraham trusted the inward light, "and it was counted to him for righteousness." He migrated to the south country, taking his flocks with him a few miles each move as he found pasture. His wife and his nephew went with him. The Patriarch, or "Great Father" of the nation to be, was a wandering herdsman, living in a tent. To him and his successors were given no creed, no priests, no temple, no Law. Religion meant to walk before GOD—that is, to be honest and clean and just in the affairs of daily life, and to obey the voice of conscience. We are not given his history, but only a few episodes of his life which show just how he obeyed or disobeyed that inward monitor.

At the outset of the dramatic story this attention to the voice of conscience and obedience to the will of GOD is given as the cause of prosperity and the origin of a great nation. This is permanently true, and would be true even if Abraham were an imaginary person. There can be no abiding peace, because there can be no common ground of goodwill among men, except for each one of us to realize that GOD'S way is best, and that it is never permissible to do evil that good may come. To do unflinching justice, to love tender mercy, and to speak unfaltering truth, is the one way of agreement and happiness among men. That peace and prosperity does follow naturally and by direct consequence upon obedience to the Will of GOD is the *fact*. That fact is stated in the *form* of a Promise. The Promise and the fact are cast in the dramatic form of a " Covenant " between the Creator and the created. The true manner in which a noble spirit makes a body beautiful and a nation grows by spiritual laws and inevitable consequences is even yet hard to understand ; a " covenant " can be understood by the simplest of mankind. But we make a great error when we imagine this legend to mean a verbal agreement between GOD and a particular man. To turn the drama into history is to make it a falsehood. It is the dramatic representation of a great hidden spiritual fact.

This covenant was, and is, on the basis of Right-doing—to hear and obey on the one side, blessings of prosperity on the other ; a prosperity which,

like the increase of flocks and herds, is in no way won at the cost of others. This is a great and permanent truth. Right action *does* bring prosperity. Honesty *is* the best policy, and if all politics were simply honest, just that and no more, we should be not far from the Kingdom of GOD. That right-doing, the same right-doing, brings prosperity in all lands, is one standing proof of the unity and Righteousness of the Power behind Evolution. The other proof is the hand of GOD in history, and nowhere is that proof more evident to our limited perceptions than in the fulfilment of prophecy. Abraham *did* become a great nation. In him all nations of the earth *were* blessed, for that nation influenced the world by the Bible and by the teaching of the Twelve Apostles more deeply than any other nation soever. With this revelation of the One True GOD the history of the Hebrew nation begins. "Hear, O Israel! the Lord thy GOD, the Lord is ONE," has been the watchword of the nation through the ages, and is so still. The Chaldean deities were many—supposed spirits of the air and the waters, the fire and the earth. GOD is ONE. He is also revealed as before all things Righteous. The heathen gods were of power, of beauty, of eloquence, and the like; none stood specially for Right-doing.

These were the primary distinctions between the true and the false ideas about GOD. He made all the Universe, and He made it in, for, and by righteousness.

Think what these words mean: "In Righteous-

ness "—there is an inner principle of harmony even in lifeless things, and a tendency of living ones always to improve: "For Righteousness," that all physical Nature should be the servant to Man, aiding the growth of a beautiful and noble race; "By Righteousness" because all was made, and is being made, by that Divine Word, which is the inspiring Reason "without Whom was not anything made that was made"—the Power that makes for Righteousness because opposition to His laws surely brings degradation and decay. **This, seen to-day to be the inward meaning and explanation of Evolution, was the original idea of the Message to Abraham at the dawn of history four thousand years ago.** The essential *meaning* of the whole legend is quite clear; its *form* is a drama which reads like a personal bargain between GOD and Abraham. It is given in this form because we each of us do as a matter of hard fact hold a personal relationship to our Father in Heaven, and because right-doing is, in truth, the line of Evolution for each of us. But we blind ourselves to a supreme truth if we think of the *form* of the story as literally true, and imagine an incredible bargain between a man and Jehovah come to earth to make it. The Covenant exists for you and me. The relation between each one of us and GOD is as much a personal relation as if there were no other soul on earth.

This "Covenant," that man should be guided by GOD'S inspiration, which is his knowledge of Right and Wrong, that he should walk by it and so become perfect, that he should receive prosperity

and blessing, and work upwards to the goal of spiritual evolution in joy rather than in pain, is the idea which pervades the whole Bible. It is the idea of "the Kingdom of GOD"—a state in which general blessedness results from GOD'S Will being done on earth as it is in heaven. Those actual words were not used till much later, but this, as the solution of all the problems of human life, is found throughout the Bible from Genesis to the concluding sentences of Revelation. That Kingdom will come on Earth. It surely will come on Earth. We are, each of us, whether we know it or not, helping or hindering, putting ourselves within it or outside of it.

Think back to what you read of the Mystery of the Body, and remember that as the body consists of millions of cells of many different kinds and many different functions, but all animated by the same life, so GOD'S Kingdom consists of millions of souls of many different capacities and duties, each animated by His Life. Every healthy cell is a factor of beauty and harmony, every unhealthy cell a factor of ugliness or disease. So likewise in the Kingdom—every healthy soul is one factor the more for harmony and one factor the less for disunion.

Space fails to trace in detail how this idea of the "Covenant" with the Hebrew nation was carried out—the rejection of the son of the Egyptian woman Hagar; the peace-loving life of Isaac (Gen. xxvi. 14-23); the strife between his twin sons, the headstrong Esau marrying Hittite women against the family tradition, which was a

condition of his birthright and inheritance of the Promise ; Jacob, sly, self-seeking, but mindful of that Promise, a strong man (Gen. xxiv. 2-10), and capable of devoted love, his seven years' service for Rachel seeming to him but a few days for the love he bore to the girl who was to be the mother of the most distinguished of his sons. You may see the consequences of each action working out, and the purpose of GOD being fulfilled through it all.

These are the opening scenes of the Hebrew drama. There follows the beautiful story of the promotion of Joseph, as the direct consequence of an upright life, to be governor of Egypt under Pharaoh—the coming of the tribe to Goshen and their isolation there both because of the pasture and because the Egyptians, only lately freed from the tyranny of the Shepherd Kings (Hyksos), hated the very name of Shepherds—the growth of the descendants of Jacob in four hundred years to be a numerous people, their enslavement and their deliverance by Moses, the divinely appointed law-giver and leader who always comes when time is ripe. History and legend are inextricably mingled, and there is scarcely any note of time. Sometimes the kernel of fact which gave the legend its form is clearly to be seen ; in other cases it cannot be traced. For instance, as to the " turning of the waters into blood," the probable origin is easy. Tropical rivers such as the Nile and the Indus often change their course by a few miles through fermenting marshland. On one occasion when (to my own knowledge) this happened on the

Indus, the river brought down great masses of reddish semi-putrid mud. The people said, "The water has become blood" (*Pāni khūn ho-gya*), just as the Egyptians did, and they also dug holes by the side of the stream so as to get water filtered through the soil. It is quite obvious that if the account in Exodus vii. 17-25 were meant literally every one must have died of thirst.

Or the overwhelming of the Egyptians in the Red Sea. They were used to the tideless Mediterranean. When in their pursuit of the Israelites they saw a great stretch of bare shore they pushed on over it, as King John did over the Wash. The tide returned and overwhelmed them, and of course this appeared miraculous to them and the Hebrews alike. Get your Bible and look up the facts. The original form of the legend is hinted at in Exodus xiv. 21—the miracle is understood as a strong wind blowing the sea back. The exaggerated form is contained in verses 22-27, and that again is a natural mode of dramatic representation when, many years later, the writer wished to bring out the fact of the Divine protection. If the water had really stood up as a wall on either hand, no King on earth who had had the experience of the "plagues" would have ventured the crossing.

The whole story is dramatic. The events are represented as following close on one another. Probably this was not the case; Pharaoh could not fail to have been convinced under such conditions. Astrology and divination were leading features in Egyptian religion, and if the plagues of frogs, flies, murrain, and the like occurred at

intervals somewhat separated in time, and were declared by Moses to be portents that his people should be set free, and if the Egyptian soothsayers denied this, the course of events is natural enough.

Again, the meaning, and not the form of the legends, is the important matter. The Power that directs the world meant to release the tribe and make of it a great nation. The drama shows the acts following hard on one another as on a stage, and exaggerates for effect. I do not mean that the exaggeration was intentional—those who wrote down the tradition of Divine protection doubtless so understood the national story, but their dramatic instinct (which also was the action of the unconscious mind) brought out the fact of the protection in this way. It is the same with the forty years' wandering in the wilderness. The tribe of slaves that left Egypt needed hardening. The same desert life which bred the Arab conquerors who followed the standard of Islam, and the Bedouins who annihilated Hicks' army, made also the warriors of Joshua. Passionate believers, cruel, bloodthirsty, enduring hunger and thirst, scorching heat, and long marches, they were very like the desert Arabs of our own day.

After leaving Egypt courage, discipline, and trust on GOD were all to learn : hence such stories as are contained in Exodus xvi., Numbers xiv. and xvi. They had to learn also the principles of conduct which are eternally true for all people, all nations, and all times—the irreducible minimum of right conduct contained in the Ten Commandments. These were veritably and indeed the com-

mands of GOD,[1] though the story of the Tables of Stone is only a dramatic way of saying that they were given by Him.

II.—THE TIME OF THE JUDGES. ABOUT B.C. 1300 TO ABOUT B.C. 1000.

The conquest of Canaan was much less thorough than a superficial reading of the Book of Joshua would lead us to suppose, though there are many references in that book to the Canaanitish tribes that remained in the land. We are definitely told in Judges ii. 3 and 20-23 that this was so. This period is the boyhood of the race—often headstrong, wilful, and inexperienced—prone to follow bad example; not yet strong enough or steadfast enough to see a principle and keep to it. This period is one of backsliding and idolatry. This word "idolatry" needs some explanation. As a boy I could never imagine why they wanted to worship other gods; the true reason is, however, quite simple. These

[1] Later on, as illumination increased, other commandments were added, and when (from about B.C. 450 to 150) the books and oral traditions were compiled into one Bible, all were referred to Moses. As to the genuine Divine inspiration of these laws, we need only consider Exod. xxii. 21–27; Lev. xix. 1; xxv. 23–28; Deut. xvi. 18–20 and 15–17; xxiv. 14–17, 19–21, and many others, and compare these with any heathen code soever, to see the enormous superiority of this Hebrew code, which works so consistently towards right-doing. Had the nation as one man obeyed these in spirit and in letter, it must by inevitable consequence have become a people ruled by God, prosperous and unassailable in its mountains by the armed nations around, because brave, united, confident in its destiny, and careless of death.

Syrian "worships" were festivals of wild excess—indecent naked dances, intoxication and revelry, and horrible human sacrifices, such as prevail among certain African tribes to this day. There was, the Roman historian Strabo tells us, a brass image of Moloch in the Phœnician (Canaanite) colony of Carthage, whose arms were sloped over a kind of furnace. Living children were placed on these arms and rolled on to the fire beneath. Scenes of horror and wild excitement like these appealed to the wild beast in man. You know yourselves that boys sometimes show a tendency to take pleasure in nakedness, indecency, and cruelty. This is a return to the primitive instincts, which find the first steps on the way of civilization and righteousness *dull*. These Hebrews found the way of peace, the Law of GOD, dull—they wanted excitement instead of self-restraint. They wanted to be free of the moral law. That is what their relapses into idolatry chiefly meant. Over and above this was the difficulty of realizing an invisible GOD of whom they were to make no graven image.

This was the next stage of a growing soul—to learn that no public opinion can make that right which is not right. Self-will, personal ambition, lascivious acts, greed, and foul living will produce their deadly crop of quarrels and degradation however many customs or laws sanction them. Custom may allow people to live for selfish enjoyment, to gain money without really earning it, to oppress and dominate others; laws may allow men to treat women as playthings or to

oppress their brother men, but the day of retribution by certain consequence will surely come, and none can stay it.

III.—The Time of the United Kingdom. About B.C. 1000 to about B.C. 930.

The natural results of the neglect of the Law of right-doing which makes men to be of one mind in a house or a nation, were tribal quarrels and disunion, weakness and defeat. Federal unity is easy between those who have the same beliefs and religion; it is impossible between those whose ideals do not agree —they are sure to have different customs, and therefore different aims. The only possibility of progress for the Twelve Tribes was a despotic rule. The prophet Samuel warned them of the disadvantages of such rule (1 Sam. viii. 4-19), but, as the story shows, it was a necessary change *because* they would not of themselves obey the law which was meant to unify the nation. Under Saul and David the tribes were welded into a national force. David, for all his personal shortcomings and sins (pardonable enough in the East, which has always considered the life of subjects at the disposal of royalty), showed, nevertheless, absolute trust in God's leading (1 Sam. xvii. 34 et seq.), great capacity for disinterested friendship (1 Sam. xx.), and splendid generosity (1 Sam. xxiv. and xxvi.). He was a brave warrior, a skilful general, and a born leader of men, and he brought the tribes to a position of

supremacy in Syria never before attained. All the Psalms are not by David, nor all the laws by Moses, but those that are his reveal such a true feeling of the personal relation of the man to GOD as Guide, Protector, and Friend that they have been for a thousand succeeding generations the heart-cry of those who, led by the same Spirit, have felt the same need of GOD'S sustaining hand.

In the time of the Kings we are approaching more authentic history, though the chronicles of the nation are still quite dramatic. No attempt is made to record systematically the events from year to year, only instances of certain striking events which reveal the character of each monarch. To this day Orientals who have never heard of the Old Testament but have the long memory for events and the practical belief in GOD as directing Power that we Europeans are so lacking in, revere the name of Solomon for greatness and wisdom. His magnificence, however, was not attained without great oppression. The *corvée* [1] in the East is of immemorial antiquity. He raised, we are told (1 Kings v. 13), thirty thousand labourers for his buildings. He left a magnificent temple and splendid palaces, but not by any such means could the Kingdom of GOD be established on earth. To do the Will had been cast into the background, and the easy tolerance of evil (1 Kings xi.) represents another phase of the over-wise mind, to which one religion is nearly as good as another. The nation was on the wrong

[1] This term means the compulsory calling out of villagers to perform labour at the orders of the Government.

path—following the ideal of royal magnificence, civil and military organization, and Oriental absolutism, instead of the obedience of free men to the Divine guidance. This part of the story shows how a people cannot be made great by a great ruler, be he never so wise. Only noble characters can produce noble conduct, and when evil thinkers are many evildoers will be many also. No Government can restrain them.

IV.—The Time of the Great Schism. About B.C. 930 to B.C. 520.

The ambition of the son and successor of Solomon to outdo his father in building, to increase the *corvée*, and to be more and more absolute, led to the great schism (1 Kings xii. 10). For four centuries the division continued, with its intermittent civil wars. Of this time the Books of the Kings of Judah and the Chronicles of the Kings of Israel are the records. They agree in the main, but, as is natural, differ in details, and their dates do not quite coincide. The leading features of the time are idolatry, occasional reforms followed by relapses in Judah, increasing luxury of the rich and oppression of the poor, and intermittent civil war, never pushed to thorough conquest by either side. Simultaneously the great military power of Babylonia was growing up and absorbing the neighbouring countries. That power had already come into conflict with Egypt and defeated the Egyptians at the decisive battle of Carchemish. A king of Judah had then sent a

contingent with the Egyptian army. The earlier part of the Books of Isaiah and Jeremiah and some of the "minor prophets" deal with this period, when coming events were casting their shadows before. It needed no special inspiration from GOD, but only common sense, to see that the growing Babylonian power, with its disciplined army, its stored wealth, or "war-chest," as we should call it nowadays, its ambition to govern the Levant, and its previous decisive victory over the Egyptian forces in Syria must soon come into collision with and vanquish the Jewish people, enervated by luxury and selfishness, divided against themselves by all manner of petty rivalries and antagonisms. The intention of Babylon in B.C. 750 to dominate Asia Minor was as clear as the intention of Germany in A.D. 1914 to dominate Europe. But those Books of Isaiah and Jeremiah contain the true prophetic foresight which subsequent history verified. That this is so may be seen from the following facts :—

(*a*) They tell the people the eternal truth that right-doing by each single person is the one and only way of national health. Not sacrifices, nor Temple services, nor foreign alliances, shall save them, but amendment of personal life (Isa. i. 10–20 ; xxxi. 1–4 ; Jer. vii. 1–15). "Cease to do evil, learn to do well," says Isaiah, and pardon and regeneration shall follow. It is declared positively (Jer. vii. 22) that God had not commanded sacrifices, but to walk before Him in righteousness.

(*b*) They declare the impending conquest, but they look beyond it to a time of national redemption. Agreeably to Eastern modes of thought and speech, which always regard

what we call "natural causes" as the direct action of God, they speak of the Captivity as God's wrath, and of the Restoration as God's forgiveness; and this, though dramatic in expression, is essentially and eternally true.

(*c*) Moses had said (Deut. xviii. 15), "A prophet shall the Lord your God raise up unto you like unto me." The book of Isaiah enlarges on this saying, and records many more prophecies which look forward to the coming of that Leader who was to be the Messiah and Saviour of the race.

From this time forward the anticipations of the best men among the Hebrews were centred in this hope.

V.—The Period of the Captivities. B.C. 520 to B.C. 457 (Edict of Cyrus).

The blow fell. First the Kingdom of Israel and then that of Judah was conquered by the Babylonian power. Samaria was colonized by Assyrian soldiers, who intermarried with the poor Jewish women who had been left behind when all the leading families had been carried captive to Babylon. They became the ancestors of the "Samaritans" of a later day. The wealth gathered by Solomon was transferred to the conquerors. The "war indemnity," by which all classes are plundered alike, had not yet been invented, and the lighter penalty of the plundered national treasury might have been easily recovered from but for the deportation of all leaders of the nation and all men of position. Only the poorer sort were left to till the land.

To this period belong Psalm cxxxvii. certainly,

and probably Psalm lxxiv., Psalm lxxix., and others.

The deported people seem to have followed the advice of Jeremiah (xxix. 1-14) to be loyal subjects to their captors. They do not seem to have been severely treated by the Babylonian Government, but they were in servitude, and they were disliked for their exclusiveness and their religious pride. The Books of Jeremiah and Ezekiel describe the earlier part of the Captivity era ; and those of Daniel and Esther deal with its later portion, though neither of these latter was probably written at the time.

The end of the seventy years' Captivity was heralded by great changes. There was war between the Babylonians and the rising Medo-Persian power. Belshazzar, the son of the king, and leader of the army, was defeated and slain by the Medes, and Babylon fell to Cyrus the Persian. The seventy years foretold by Jeremiah (xxv. 12 and xxix. 10) were nearly ended, and the Books of Daniel and Esther represent the chief men of Judah as high in favour with the Persian princes Darius and Xerxes.[1]

In the Book of Daniel occurs for the first time the promise of the establishment of "the Kingdom of GOD" over all the nations of the earth. That prophecy declares that after the Babylonian, Persian, and Grecian Empires have fallen and the iron Empire of Rome shall have become mixed with clay and fallen in its

[1] Called Ahasuerus.

turn, GOD shall set up a kingdom which shall never be destroyed but shall fill the whole earth. To this event the Jews continually looked forward. Very few of them took any heed of the warnings by some of the prophets that this kingdom must be founded on general righteousness, and that it would *not* be a Jewish dominion over Gentiles. Most of them, on the contrary, looked to see a time when the Jewish foot would be planted on the necks of the Gentiles, and the Jews would take full revenge for the indignities and the oppressions the nation had endured. Their notion of the Kingdom of GOD was that it meant their own ascendancy in its hardest, basest, cruellest form. At each favourable turn in their history they thought that this change was coming to them by Divine favour and destiny, instead of considering that the best among the prophets had declared that it meant the doing of GOD'S will on Earth—the practice of justice, mercy, and truth.

VI.—THE RESTORATION PERIOD. B.C. 457 TO B.C. 6.

Cyrus the Persian inaugurated a new policy for the captive Jews; he perceived that they would be more profitable to the Persian Empire as subjects in their own land than as exiles in Babylonia. He allowed a select band to return in 457 B.C. The account of that return is given in the Books of Ezra and Nehemiah. They thought that this was the beginning of the promised Kingdom. The burst of rejoicing that

followed the edict can be gathered from Isaiah xlv. and some of the chapters following, and from Psalms cxxvi., cxxvii.

But the nation never forgot the tremendous lesson it had received. Never again did it fall into the gross idolatry which the prophets had denounced. The warnings of the prophets had been tested by facts and had been found very truth. On their return the deported Jews at once set about rebuilding the Temple. They made the Law of Moses their civil Constitution and the law of the land. But they were very far indeed from perceiving that the kingdom they desired could be founded only upon justice and goodwill to all. One of their first acts was to refuse the aid of the Samaritans in rebuilding the Temple (Ezra iv. 1-4). For two generations these Samaritans had been Jewish by training. The poor Jewish mothers had done their best to bring up the children of their foreign husbands in the Law as far as they knew it. The Samaritans had a version of the Books of Moses. They were anxious to be recognized as Jews, and would gladly have followed Ezra's directions. They came with joy to aid in the renewal of Jewish life. They were scornfully rejected (Ezra iv. 2, 3), and the new city was begun in hatred. Sacrifices and ritual took the place of "the weightier matters of the Law"—justice, to take no bribes, to tell no lies—and religion became a matter, not of upright life but of creed and observances.

Nevertheless a very great work was done in this period. The old traditions of the nation and

the books of the law and the prophets were carefully and reverently collected. For two centuries or more the school of Jewish rabbis (the Massoretes) compared all the manuscripts at their disposal and decided between different versions. They finished their work about B.C. 150, after three centuries of careful editing ; and in place of isolated books which differed, the nation then had a received text—the Jewish Bible—which is now our Old Testament. From henceforth they had Scriptures which they regarded as so sacred that not one letter of it was allowed to be altered.

During these centuries Palestine was a province under foreign governors, at first Persian, and then, after Alexander's conquests, it fell to Greece. After the successful rising of the Maccabees against Greek tyrants, the High Priests regained independent rule for a short time. But the two centuries preceding the birth of Christ were very troublous times. Arabs, Greeks, Egyptians, and Romans menaced Jewish independence ; quarrels were rife between the Sadducees, who admired Greek art, Greek games, Greek military power, and wished to imitate the Greeks in all things, and the Pharisees, who clung to a rigid and conservative orthodoxy. The Idumean (Arab) Herod became ruler by the favour of Augustus Cæsar, and when he died, in B.C. 4, the country was divided by the Emperor between his four sons. The misgovernment of the eldest was such that the Jews of Judea petitioned against him at Cæsar's judgment-seat. He was banished to Gaul, and a Roman procurator was put in his place to super-

vise the rule of the High Priest and to secure the regular payment of the tribute. This was the state of affairs described in the opening sentences of St. Luke's Gospel.

The time for the appearance of the long-foretold Messiah who was to proclaim the Kingdom of GOD had come, and in order to understand how it came about that the Jews did not recognize in Him the Saviour who was to restore all things, you must realize something more about "prophecy."

This is not easy, because you must clear your mind of the vulgar idea that a "prophet" is one who foresees in a miraculous manner events which are fated to come to pass. This is but partially true. A prophet (*pro phētes*) is one who "speaks forth" true principles. He may or may not foretell future events. And I must ask you to do a little close reasoning if you wish to see your way through this matter.

An astronomer who knows the laws of the motions of the stars can tell to the very minute the times of eclipses for hundreds of years back. Dates in ancient history are often verified by this means. He can also foretell eclipses and other phenomena hundreds of years forward, but we do not call this "prophecy"—the events, though future, are "known." Now, an Intelligence which knows spiritual causes as the astronomer knows physical causes could as certainly predict all human events as the astronomer can foretell those future positions of the sun and planets which cause eclipses and seasonal change.

GOD has this knowledge of causes, and those who come into mental contact with Him can sometimes, and in a small measure, receive a part of His foreknowledge. There have been prophets in all countries and all ages. You have already read in Chapter IV. of some modern instances; and not only in Judea but in other lands prophecy of one kind or another has been known. It is not superstition, but historical fact. All the religions of antiquity rested largely upon auguries and "oracles," which are forms or varieties of prophecy; and we shall make a great mistake if we think of all these auguries as false—mere delusion and superstition. Men make many errors, but they do not lavish wealth generation after generation on such a shrine as the Oracle of Delphi, to which hundreds repaired to get help in difficulties, if that help is a mere delusion; and when a hard-headed Roman lawyer [1] says, "*Manet id quod negari non potest, multis sæculis verax fuisse id oraculum,*" we may safely assume that he is speaking of well-known fact.

When Socrates, too, wisest of men, tells us quite soberly of the inward voice which spoke to him and told him of matters beyond his own knowledge, we had best compare our lives with his before we presume to let our ignorance doubt what a man of such blameless truth affirms.

Even all the prophecies recorded in the Bible are not by Hebrew prophets only. Balaam was not a Hebrew, but he was "a prophet of the Lord," and his words were true (Num. xxii.-xxiv.).

[1] Cicero, "De Naturâ Deorum."

And just as the Romans had schools of augury and the Egyptians schools of astrology, so the Jews had schools of the prophets (2 Kings iv. 38, vi., xvii. 19; 2 Chron. xviii. 5; and many others). Of course this does not mean schools for children, but for young men, like the monasteries of mediæval times. And these prophets were numerous (1 Kings xxii. 6), and sometimes they prophesied truly and sometimes falsely, according to the high or low personal character of each. Even the prophecies ascribed to a real prophet, like Isaiah, did not all come to pass; the destruction of Babylon (Isa. xiii.) did not occur, the city submitted and was taken without a siege by Cyrus the Persian, and it was a flourishing city in the time of Alexander of Macedon two hundred years later and for a long time after that.

Sometimes prophecies true as to meaning are coloured as to their dramatic manner by the personal idea of the prophet. For instance, it is quite incredible that the GOD of Truth who made the world and all that therein is, whose dominion is from everlasting, should hold a council in heaven and send out a lying spirit to lure to destruction the king of a petty nation as Micaiah said to Ahab (1 Kings xxii. 19-23). If that were literally true, religion would be hateful and a degrading thing. And the bitter, cruel, revengeful Jewish temper again and again led some prophets to expect that the Kingdom of GOD (which they truly foresaw) would be established by a bloody vengeance of Jews upon other nations (Zech. xiv. 12; Ezek. xxxix. 2-4, 12, 14, 17, and

many others), pardonable enough if we remember that they were written in a cruel captivity, but untrue for all that. How, then, could the Jews of Christ's day distinguish—how can we distinguish—between the true and the false?

By two signs—

(*a*) The true prophet is regardless of his own interests, and is free from personal passions. Ahab's prophets declared what they knew would please the king—not that they were necessarily impostors, but they spoke from their own self-confident desires. Micaiah spoke truth against his own interests. Jeremiah was put in the stocks (Jer. xx. 2). Amos was hunted from Bethel (Amos vii. 10–17). The true prophet makes no claim to personal greatness, and reaps no personal advantage ; he is usually, like Elijah, Elisha, Amos, Jeremiah, and St. John Baptist, disliked by the priests and rulers, because he utters warnings against them. His utterances do not bring him place, or power, or honour (Jer. v. 30 ; xxvi. 8).

(*b*) Though now and then a true prophet simply declares a future event, for the most part he goes to the roots and causes of things.

Before the Captivity, when Babylonia was growing great on the north and Egypt was powerful on the south, the path of safety for Israel was to be a united nation. From her mountains such a people might, like Switzerland, have defied her foes. But as friendship can only exist between honest persons and love between unselfish persons, so unity can exist only between those that are agreed in principle, and the only principles on which men can permanently agree are the principles of GOD'S righteousness. Only sincerity and right-dealing can bind men together.

Therefore when the King of Judah was warned to execute judgment and righteousness and to deliver the despoiled out of the hand of his oppressor (Jer. xxii. 3), when the people were warned that to forget that GOD really directs the world is to be without understanding, that to get rich quick by trickery and deceit is vain, that for leaders to maintain their authority by shirking the truth and saying only what would please, and that people should be content to have it so, is national suicide—all these prophecies were obviously declarations whither good or evil principles lead (Jer. v. 20-31; Zeph. iii. 1-6; Isa. xxx. 8-16). The warning that GOD will not "interfere" to protect the Temple or to save the "orthodox," but will use the Assyrian to destroy Jerusalem, exactly as Shiloh, the sanctuary of Ephraim, had been destroyed (Jer. vii. 4-15), was not a mere declaration of a future event; it carried its proof with it. It was not hard to judge whether such prophecies were true or not. It was not hard to see that avarice, luxury (Amos. vi. 1-7), profit gained by injustice for spending on self-indulgence, (Isa. v.), beclouding truth by specious arguments, drink, uncleanness, and indifference to all that is true and right, (Isa. v. 8-23, x. 1-7), would lead to disaster. And even past history might have shown the truth of the prophecy that an Egyptian alliance could not save a degenerate people from the consequences of their sins (Isa. xxx. 1-5, xxxi. 1-9). The disregard of the true sources of strength and prosperity was *bound* to work out as it did. Any one who

wished to see truly, and would set his own passions and prejudices on one side in order to do so, could and would have distinguished between the true and false prophecies.

The reason for this necessity for using judgment is quite simple. Blind acceptance of prophecy, however true that prophecy may be, is mere superstition. Blind surrender of the will leads to degeneracy of soul. All GOD'S dealing with us is to encourage the development of reason and judgment. Therefore while the *historical* application of any prophecy may be obscure, and is scarcely ever clear till after its fulfilment, its *dramatic* warnings can always be understood by men of goodwill, because those warnings deal with the causes of prosperity and the causes of decline.

VII.—FROM THE BIRTH OF CHRIST TO THE DESTRUCTION OF JERUSALEM. B.C. 6[1] TO A.D. 70.

Now, apply this to the prophecies that deal with the Kingdom of GOD. A sincere Jew of the time of St. John Baptist, studying the prophecies of the Restoration of Israel (then incorporated into the Bible) with single-mindedness, would have seen, not only (as the poorer sort of people at large did see) that a Messiah of their own nation should bring in the new Kingdom, but that He would be directed by the principles which give wisdom and understanding, counsel and might, knowledge and the fear of GOD, not judging according to mere appearances but with righteous-

[1] Herod died in B.C. 4, while Jesus was two years old or under.

this alone could result the time of peace and blessedness in which none should hurt or destroy in all GOD'S holy mountain (Isa. lxv. 25). He would have seen without fail that the Restoration was to come, and could only come, by the wicked forsaking his way and the unrighteous man his thoughts and returning to GOD'S guidance (Isa. lv. 4), that the effect of this would be peace and quietness and confidence for ever. For GOD not only inhabits eternity and fills all space and all time, but also acts on individuals, dwelling with the contrite and humble of heart, reviving the spirit of man (Isa. xxxii. 15-17, xl. 29).

This coming of the Kingdom of GOD in and by righteousness in the world, and by no other means, would, to such a student of prophecy, have been quite clear. He could not have understood till after the event *how* the Messiah could be despised and rejected of men and yet bring in an everlasting Kingdom, but He could (as many did) recognize Him Who was anointed to preach good tidings to the poor, to bind up the broken-hearted, and give recovery of sight to the blind, release to the captives of error, and to proclaim the acceptable year of the Lord. He could see that the promised creation of a new heaven and a new earth in which the former state of things should be remembered no more (Isa. lxv. 17) *could* come about, and was declared to come about, only by all men being filled with the desire to co-operate in right-doing, by having the Law in their hearts, and acknowledging the Presence of GOD in the world of matter and the world of man (Jer. xxxi. 33).

He could see that this gathering of the true Israel out of the nations was to be by the cleansing from misdoing and by the gift of a new heart and a new spirit by which they should keep GOD'S statutes and judgments to do them (Ezek. xxxvi. 25).

Such a reader would have seen from the notorious misgovernment around him that the "day of the Lord" *must*, in the nature of things, be a day of judgment in which GOD would be a swift witness against the superstitious and the unclean and the false-hearted and against those who heap up riches by injustice and turn aside the strangers from their right (Mal. iii. 5-6). He would have seen that not the denial of this or that form of religion is the real opposition to GOD, but that all real atheism is the feeling that it is useless to serve GOD, and the belief that the really happy and successful are those who are rich and self-satisfied (Mal. ii. 13-15). That men should discern between right-doing and wrong-doing, between those who profess to be serving GOD and those who really are serving Him, is the condition of the rising of the Son of Righteousness with wings of healing (Mal. iii. 18; iv. 2). So only could be set up that Kingdom of GOD which should never be destroyed nor its sovereignty pass away, which should become as a great mountain and fill the whole earth (Dan. ii. 44). He had but to compare the example and teaching of JESUS with the best that the prophets had said in order to be convinced of the truth of the principles which He proclaimed.

Perhaps it was because the Jews took all prophecy literally, that JESUS did not found his claim to be the Messiah upon his birth at Bethlehem (Micah v. 2), nor claim to be born of a virgin of David's line. His only allusion to the fulfilment of Isaiah's prophecies was when he sat in the synagogue at Nazareth and declared that He had come to bind the broken-hearted and to give sight to the blind, and that this prophecy was that day fulfilled before His hearers (Luke iv. 21). He did once declare S. John Baptist to be the promised Elijah (Mal. iv. 4), but He never made much of these things, choosing rather to base his whole teaching on the need for candour, right-doing, and goodwill as the causes of blessedness among men.

This was what the rulers should have looked for to test his claims by.

What did they actually look for?

They looked for a miraculous deliverance in which, apart from any visible causes, GOD should deliver their enemies to slaughter (Isa. xxxiv. 2-8); for an appointed and destined year of delivery which might come at any moment, in which all who had oppressed Judah should be drunk with disasters (Isa. xl., xliv. 26; Ezek. xxxix. 2-4, 12-14, 17-20). They looked for a miraculous interference from GOD for their own exaltation and a free course for Jewish exclusiveness, bitterness, and revenge. Therefore they would not consider, and could not see, the principles of the Kingdom of Heaven which JESUS declared to them. And in like manner we also shall be unable to

see those principles if we make religion into a specialism—something apart from daily life. No statement is final, but we may put it that GOD works through infinitesimals—the Atom and the Cell, whose aggregate properties are His laws of Nature. "Consider the lilies, how they grow" is still our lesson as to that mysterious potency whereby the cells of each blade of grass are marshalled into place and form; whereby also each dewdrop has in miniature all the properties of the ocean.

Infinitesimally small acts likewise make up the world of morality. Wherever there is the alternative between self-indulgence and temperate pleasure, between industry and idleness, between apathy and goodwill, between right and wrong, there also is the means of doing all to the glory of GOD. Every act soever is conformable or unconformable to the Kingdom, and every right act is a cause of it, and fits us for our place in it. The Kingdom will have come when men on earth do GOD'S will as it is done in heaven. It can come in no other way.

And all this in no narrow, ecclesiastical, "saintly" sense, but in full, breezy freedom. It is the curse of religion that it has been made a matter of creeds. The "Kingdom of Heaven" is the happy company of the brave, honourable and gifted men and women in whose company we feel at our strongest, our happiest, and our best. These belong to the Kingdom here and now; and the more there are of them, the more that Kingdom is present fact. Every science, every

art, every phase of insight and action has its place therein. Infinitely various, it is no single type of character, no artificial and unnatural uniformity, but includes every aspect of healthy life.

7. The perfect revelation of God.

This was the real revelation of GOD, and it is in close and perfect agreement with all that Science has taught us and with all that later ages have discovered. To have followed its guidance would have been the release of the world from nine-tenths of its sorrow and pain. It would have led it along the path of Love and Joy. This truth is exactly the same for us as for the Jews of our Lord's day. It is by the knowledge that the things of the Spirit are the great realities that it becomes easy to disregard the desires of the flesh, the desires of having and getting, and the pride which leads to tyranny. We do not seek to earn a future reward, but to begin here and now the life of the soul that must blossom into future joy.

In the next chapter I shall try to show you why that growth of the Kingdom of Heaven on earth is the only way in which peace and goodwill can come to the world. It is the fulfilment of human Evolution, and each one of us has his or her part to play in it.

CHAPTER VIII

THE MYSTERY OF THE KINGDOM OF HEAVEN

To you it is given to know the mysteries of the Kingdom of Heaven, but to them it is not given. And in them is fulfilled the prophecy of Isaiah, which saith :

"By hearing ye shall hear, and shall not understand ;
And seeing ye shall see, and shall not perceive ;
For this people's heart is waxed gross,
And their ears are dull of hearing,
And their eyes they have closed ;
Lest at any time they should see with their eyes
And hear with their ears,
And should understand with their heart,
And should be converted, and I should heal them."

—MATT. xiii.

1. War and peace.

IT seems strange to write of the Coming of the Kingdom of GOD, at a time when Europe is convulsed by the most terrible war recorded in history. Thousands and thousands of brave young lives cut short on land and sea, each leaving some dearest of all to mourn his loss—thousands more maimed and crippled for life—thousands of desolate homes which will never welcome father or husband again—thousands of fair young girls

who see before them only a long vista of grey years—thousands of mothers and children reduced to dire poverty—towns and villages ruined and destroyed—a deadly legacy of hatred left by crimes against civilization without parallel since the Thirty Years War—what have these horrors to do with the Coming of the Kingdom of GOD, the reign of the Prince of Peace?

Much, every way.

For these horrors are the direct result of the refusal to accept the teaching of the Spirit of GOD. If we will not learn by Love and Reason we must learn by pain, a pain in which all have to share, because we are, whether we acknowledge it or not, members one of another.

There are two principles either of which we human beings may choose as our guide in life. To each boy and girl the choice is offered : Will you live for pleasure or for duty—for self-pleasing or for GOD-pleasing? Will you trust your own short-sighted will, or the Eternal Wisdom which made the world for Righteousness?

On your choice depends the future of your country.

Will you take your stand on the principle of Evolution which governs the brute world—the " Struggle for Existence " and the " Survival of the (physically) fittest "?

If so, you will be led by relentless logic to declare that the weak are to be used and exploited by the strong—that the poor must ever be the slaves of the powerful—that military force, cannon, submarines, airships,

high explosives, and poison-gases are the means of government—that the Super-man, reckless of his own life and still more reckless of the lives of others, is the best we can hope to be, trampling on all who withstand us—that there is no law but the law of the strongest, no Supreme Love, no CHRIST who has vanquished Death, no GOD who judges the earth. You will be irresistibly led into the condition of those who hear wisdom but understand it not, with gross hearts and dull ears and blind eyes perceiving only the outward things and ignorant of the very existence of the real world of Spirit which governs the world of Matter, and your world will perish in blood and tears.

Or will you take as your guide the principle of co-operation — that in all human relations "fittest" means "morally fittest"—cleanest, truest, most honest, wisest—that Man is essentially soul rather than body, and that mutual help and goodwill are the conditions of all truly "human" action?

If so, you will, equally logically, be led to see that the conditions of national happiness are that the nation should be full of happy homes, that these come by all being well and usefully employed, producing, not the luxuries which debase and weaken, but the things which are for use and beauty, which strengthen bodies and beautify minds, that this can come only by strict justice to, and sympathy with, others, that all governments should be the common action of men to make this possible by directing all energies to this end, that the things

of the Mind and the Spirit are the great Realities, that GOD overrules the waywardness of men to turn to the praise of all that is true and noble and unselfish and heroic, that it is His Spirit which hath made us and not we ourselves, by any theories or self-willing, and we shall then in truth go into His gates with thanksgiving and into His courts with praise.

2. The choice.

This is the choice before you as surely as in those ancient days when Moses laid before his people the Way of Blessing and the Way of the Curse.

> Choose well! Your choice is
> Brief and yet endless!

Wars grow from the root of selfish competition to have and to get. As long as men desire to have without earning there will be quarrels on the small scale and wars on the great. Wars come like a disease: cell after cell of the body sickens, and the severe "illness," which is Nature's attempt to throw off the poison, comes on—the whole energy of the body is devoted to the one aim of recovery. And so in a nation: mind after mind is infected with the poison of luxury, or self-seeking, or domination, or self-glory; violence and wrong follow, which must be resisted by force lest still worse befall, for cowardly consent to wrong is even worse than war; and then comes the terror which shows all men the true nature of evil.

The true cause of war and its remedy has been

before the world for four thousand years. It was laid down in the Law, it was proclaimed by the prophets which have been since the world began, it was summed up by the brother of the Lord Jesus :—

> " Whence come wars and fightings among you? Come they not hence, even of your lusts? Ye lust and have not, ye kill and desire to have and cannot obtain. . . . Ye ask and receive not because ye ask amiss, that ye may consume it upon your lusts " (Jas. iv. 1-3).

Some talk of " war against war," that this terror shall be inflicted on the world no more, and they think to prevent it by a council of the nations, or by admitting " the people " to the conduct of great affairs of state, or by Arbitration treaties.

These things may help, but they cannot suffice. A council wherein the councillors are wise and honest is the great safeguard for wisdom and honesty ; but a council of men full of the desire to overreach, only means the spreading of nets of lies and intrigue. Nothing makes the plain man more disposed to use and justify violence than the feeling that he is being entangled in a web of lawyers' words, whose object is to confuse the real issues and to secure victory for injustice. Are " the people,"—ignorant of history —to try over again all the old mistakes of kings? Are the two nations who stand face to face in Ireland, bigoted, narrow, and violent, likely to be just or wise or righteous guides? Are the

men who make regulations to restrict output and cannot see that the only road to cheapness and plenty is abundance of production, who put the idle and the industrious workman on the same level of pay, who make imaginary enmity between Capital and Labour and strike for more pay in time of national distress—are these such wise guides that we should call them to direct difficult problems of State which turn on the just or unjust aspirations of foreign nations?

Will arbitration treaties be more faithfully observed than other treaties, if short-sighted self-interest rather than justice and insight govern the minds of those who make them and have to carry them out?

3. Personal character the solution.

Some will say that these questions are too hard for boys and girls. They are not. They are the questions you have to solve. The world of to-morrow is yours: we elders are slipping out of it. Yours is the heritage, yours the power, yours the coming day; and if you see the great truth that PERSONAL CHARACTER is the one and only remedy, you will make that coming day the truly glorious dawn of a nobler society than we of the dying generation have made.

Some say that this bitter war shows that "Christianity has failed." You will hear this often.

It is astounding how we will do anything rather than shoulder the blame. It is *we* that have failed. Truth never fails, but we often fail to

understand and to practise. One way that we fail is that (like the Hebrews of the Wandering) some of us wish to live without rule, to be a law to ourselves, wilfully idolizing successful dishonesty, delicate indolence, and elegant immorality ; others (like Jews of a later day) wish to make hard-and-fast Law take the place of Justice, Mercy, and Truth ; others, again (like the Pharisees), want to make all men think alike, and imagine that Religion means uniformity of creeds and observances. Others, again, "forget GOD" and leave Him out of their reckoning; as if they could make the world afresh by pamphlets and "new ideas," as if CHRIST had not risen and were not verily and indeed the Ruler of this planet—King of its kings and Lord of its lords.

4. Principles are not rules.

JESUS CHRIST invented no new "Religion." He gave no rules. He laid down PRINCIPLES. The difference is that a rule is invariable. "Thou shalt not steal" admits of no reasonable opposite : it is always applicable. But principles are often paradoxes ; they are two-edged and require sound judgment (i.e. wise souls) for their application. Sometimes it is true that "He that is not with us is against us." There are times when every honest man is bound to take sides : every honest man must denounce the wickedness which wrecked Belgium. Every man and woman who, absorbed in pleasure or comfort, stands aloof on that question is against the forces of good. Every man and woman who stands wilfully idle in this

day of Britain's distress is against his Mother-land. Again, there are times when issues are in doubt and an honest man may be unable to make up his mind—times when it is true that "He that is not against us is with us." Though contradictory, each statement is true in its time and place.

Similarly, in contrast with the Old Law—an eye for an eye and a tooth for a tooth—JESUS laid down the principle of non-resistance to personal injuries. But he said nothing against the heroism which stands against injustice to others. He laid down no code of national conduct. He drove out the defilers of the Temple with a whip,[1] and the same lips which said, "Father, forgive them, for they know not what they do," said also, "Ye serpents! ye generation of vipers! how can ye escape the judgment of hell?" and uttered that sternest of all warnings—

> "But and if that servant shall say in his heart, My lord delayeth his coming; and shall begin to smite his fellow-servants, and to eat and drink with the drunken; the lord of that servant shall come in a day when he looketh not for him, and in an hour whereof he is not aware, and shall cut him asunder,[2] and appoint him his portion with the hypocrites: there shall be weeping and gnashing of teeth."

Power implies punishment of the incorrigible. After He had suffered in silence the worst that

[1] Cf. John ii. 15.

[2] Gr. *severely flog.*

His enemies could do, to Him was, and is, given all power in Heaven and on earth, and "in Righteousness He doth judge AND MAKE WAR." And however readily we may admit that the words written down by St. John in Patmos are figurative, I, for one, cannot believe that the figure stands for something which does not resemble war at all. Suffering and endurance first, then the crown of eternal kingship, and the sword which is drawn for ever on the side of Right, and the flame which consumes the evil and withers up the false.

The demand made by JESUS that men should "believe on Him" is still very frequently misinterpreted and misunderstood. That demand was for the open mind which recognizes truth when placed before it. It was no challenge for blind acceptance of theories about Himself, His birth, or His mission, still less for the suppression of reason.

On the contrary, His appeal is constantly to the understanding—"Have ye understood these things?" and "How is it that ye do not yet understand?" And if we now would understand, we must always remember that His words convey principles, leaving it to our judgment which to apply in any given case. If we turn His words into rules, we make them misleading or impossible. He said, indeed (Matt. xxvi. 39), that one principle is to take no revenge for personal violence or wrong, just as Themistocles said to Eurybiades, who would have interrupted his warnings to the people of Athens by a blow, "Strike! but hear"; but He said

also that one who will not listen to reason and justice should be put out of fellowship (Matt. xviii. 15-17). Perhaps when we insist on the impossibility of carrying out His precepts we are sometimes more anxious to justify ourselves by proving those precepts unpractical than to discover their true bearings that we may do them.

5. The appeal of Jesus to the understanding.

If we turn to the words of CHRIST with reference to the Kingdom of Heaven, we shall find not only that its mysteries are explicable, but that He explained them.

He began His ministry with the same words that John the Baptist had used—"The Kingdom of Heaven is at hand." In the synagogue at Nazareth he announced himself as fulfilling the prophecy of the coming Messiah. He told the Samaritan woman at the well, and afterwards his Apostles, that He was indeed the CHRIST. He made the same declaration before Caiaphas when He knew that this declaration would lead direct to the Cross. He told His disciples that the Kingdom would surely come and that no man could stay it. Therefore we believe that it is even now on its conquering way. And we believe this, too, because all that we see around us is in accord with that Promise.

But because this Kingdom, like all of GOD'S creative action, is the result of internal causes, not imposed from outside by Almighty power, He said, "The Kingdom of GOD is within you." Because it is like all other evolutionary change,

it comes "without observation," like leaven in the meal and like seed in the ground.

The central idea of His teaching was the same as had been given to the Hebrew patriarch—that personal guidance by our heavenly Father is possible to all men here and now, each in his degree, and that this guidance is the one and only means of blessedness for men.

The message to Abraham was, "I am the Lord thy GOD, walk thou before Me and be thou perfect." JESUS said, "Be ye therefore perfect, as your Father which is in heaven is perfect," and He indicated the means: "If any man shall do His Will . . . We will come unto him and make Our abode with him," this doing of the Will securing the personal assistance.

St. Augustine, who knew well enough what "Christianity" meant, wrote long ago:—

> "For the thing itself which is now called the Christian religion really was known to the ancients, nor was wanting at any time from the beginning of the human race until the time that CHRIST came in the flesh; from whence the true religion which had previously existed began to be called 'Christian'; and this in our day is the Christian religion; not as having been wanting in former times, but as having in later times received this name" ("Opera," vol. i. p. 12).

That the putting away of wrongdoing was the first step to the blessedness of Divine guidance

was the announcement made by John the Baptist to those who thought that their Jewish birthright entitled them to its privileges. "Blessedness" means completed and lasting happiness, and the whole teaching of CHRIST is that this happiness is reached by obedience to the Divine promptings in the heart. This is the new birth by cleansing and the Spirit—the one eternal, changeless means whereby souls can awake from illusion, can arise from deadness of mind and be superior to the changes and chances of life, can grow from strength to strength till they form a community wherein there is none that loveth or maketh a lie, and wherein *therefore* there is peace and blessedness.

He tells the Jews that He, casting out evil by the power of GOD, proves to them that the Kingdom is then and there actually offered for their acceptance; that the publicans and harlots, receiving John's teaching of repentance, do actually enter in before the Pharisees, who would not admit the truth of the message even when its good effects were plain before their eyes. To the "poor in spirit"—that is, to those who detach their minds from earthly riches and to those who endure persecution for Right's sake—He says that theirs *is*, not shall be, the Kingdom of Heaven; and that He does not use the present tense as a mere figure of speech is shown by His use of the future in the other six beatitudes. That they who mourn shall be comforted, that the "meek" (i.e. πραεῖς, reasonable, as opposed to ὑπερφρονες, violent and self-assertive) shall inherit the earth, that the

merciful shall obtain mercy, and that the pure in heart shall see GOD—these phrases are all intimately associated with the idea how the Kingdom shall be fully realized on earth.

6. The parables of the kingdom.

Let us now see how the different aspects of this main theme were presented in the parables.

In the first of the series He compares the Word, or message, of the Kingdom to seed corn, and contrasts its reception in different hearts. The fruit is to be borne in this present time, and is the kind of life that results from the reception of the inner principle. Again, under a like simile of good and bad seed in a field, He speaks of the sons of the Kingdom and the sons of evil growing up together, and of a final weeding-out of the evil : in the former parable the seed was the Word, the germ of knowledge ; in this, the men themselves are the ripening grain, and the harvest is in "the end of the age," in the after-life. Again, He says its growth in the world is silent and by internal life-process, as corn grows in the fields : and it comes from an origin seemingly insignificant—a change of heart, just as small seed may become a great tree. It is a leaven pervading society and secretly changing its nature.

All these deal with the evolution of the Kingdom—its course of growth—and show it as a secret influence moulding the lives of men. He tells His disciples that they should not taste of death

till the great movement had set in with power (Mark ix. 1).

There is, He explains to the more advanced of His followers, a personal sense also : to the man who is seeking for the Divine guidance rather than for any gift it is the power of GOD and the Wisdom of GOD springing up a living water into Life Eternal—the forming, moulding, all-victorious Spirit which raises above all the accidents of Time and Sense which we call "death." He who has had a glimpse of this glorious life seeks for it as for hid treasure, and counts all things as dross in comparison with the pearl of Truth, pure, unspotted, and priceless. And yet this hid treasure cannot be a selfish possession, for to hide it in a napkin is to lose it. Again, it is not to be thought of under the similitude of riches alone, for it is external as well as internal to man—a great net sweeping the sea of Time ; and it is Intelligence which, revealing new aspects of truth, revivifies the old, and, like a householder, brings them forth for use.

There is future sense also, but it is linked to the present by bonds of cause and effect. When the Spirit shall be manifest in all flesh, and the earth shall be filled with the knowledge of GOD as the waters cover the sea, then the Kingdom will have "come," being visibly and outwardly established as the result of its establishment in all wills. The prayer which all Christendom has repeated for centuries offers a complete parallel to this teaching :—

GOD is our Father in Heaven—and we may

think of that "heaven" according to our capacities as being in the sky, or as the Love that is interior to the Power that makes and fills the Universe—the effect will be practically the same. Under whatever forms, we bless His Name and hold it sacred ; and we desire His Kingdom, which can come to the world only by His Will being done on earth as it is done already in the highest. We ask for our daily bread, whether of the body or of the soul ; and for forgiveness as we forgive, for thus only can we become fit to be citizens of the Kingdom ; and we pray that we may not be put to trial, but may be gradually delivered from evil as we grow to learn by love and reason instead of by pain, and so become fitted for that power and glory in which He reigns for ever and ever.

7. The principle of Justice and the principle of Forgiveness.

But some will say, When are we to apply the principle of Justice and when the principle of Forgiveness? A sufficient answer would be: "If thy brother sin against thee seven times in the day, and seven times turn again saying, I repent, thou shalt forgive him." But whether repentance be expressed or not we shall scarcely go wrong if we act on the latter principle for all injuries done to ourselves, and on the former for wrongs to others. This is already done by gentlemen. Time was, not so long ago, when honour was supposed to need a duel to avenge an insulting word. Now the well-bred man knows that the reviler injures only himself.

Le bruit est pour le fat ; la plainte est pour le sot ;
L'honnête homme insulté s'éloigne et ne dit mot.

Forgiveness is a personal matter: it cannot be invoked to stop the precautions needed to prevent a wrong-doer from repeating his wickedness.

8. The story of the Early Christians.

At the same time, it is a remarkable fact that the most striking growth of Christianity took place when the principle of non-resistance was fearlessly acted upon. The first Christians were few in numbers and lowly in position—not many noble, not many great ones were called. Persecuted, they had no redress—they suffered in silence—and their steadfastness before horrible deaths in the arena rather than deny CHRIST moved the wonder and the admiration of their judges: 'The blood of the martyrs was the seed of the Church.' Men saw that they were in the presence of a supernatural power, and they bowed before its majesty. Truth spread like leaven—these men and women dying for a great Reality were its best evidence. What was it that gave them their extraordinary courage?

It was the Resurrection of CHRIST—the sure knowledge that there really is a life of the soul where we meet the noble, the great, and the true of all the ages, whom the world could not tame, the Children of the Second Birth:—

Christian and pagan, king and slave,
Soldier and anchorite :
Distinctions that we think so grave
Are nothing in their sight.

They do not ask who pined unseen,
Who was on action hurled,
Whose one bond is that all have been
Unspotted by the world.

The early Christians knew that CHRIST'S victory over the grave was just this assurance that death is as natural as birth, and to the brave and noble it is really and truly in hard fact the gate of life immortal, and they feared naught that man could do.

So their example spread till more than half the Roman armies were composed of Christians. These early Christians were troubled by no foolish nonsense about bearing arms being contrary to Christianity ; they were ready to lay down their lives at the call of duty, as every Christian soldier is to-day.

The cunning and politic Constantine saw his opportunity in the conflict with Licinius—he professed himself a Christian and won the enthusiastic support of the Christian legions. What sort of Christian he was, appears from the fact that he put to death without mercy all who opposed his ambition, and that he deferred baptism till his death-bed, arguing that if baptism washes away sins it is best put off till opportunities to sin are over ! With his accession to the throne, Christians entered on wealth and power. Self-interest made nominal Christians much more numerous than real ones. The thorns of the world sprang up and choked the living Word.

Then came Augustine of Hippo with his dream of the *Civitas Dei*—a Rome in which authority

and power should be allies and supporters of Justice and Truth—a dream which the Romans of the fourth century were too degenerate to make a reality. Charlemagne, centuries after, gave effect to the idea. His empire, which extended from the North Sea to the Mediterranean and from the Atlantic to the Euxine, was the realization of an alliance between Church and State. Its ministers were the Bishops and the Wardens of the Marches. It Christianized mediæval Europe, brought order out of the chaos of private wars, established feudalism and chivalry, made Rome the tribunal of kings, and perished finally with the Bourbons at Austerlitz. It, like the Roman Empire, came to its end by human greed, by the insatiable selfishness which abuses power to personal profit and degrades eternal principles into creeds and policies.

9. Character is of the soul and deathless.

But the one eternal human reality is the life of the soul, and its indestructible ideal—that Power shall be allied to Right. It is for you to remould this ideal into new form. But its realization depends now, as it did then, on PERSONAL CHARACTER; and that character is, in the long run, inseparable from the conviction that the fashion of this world passeth away, but the Word of the Lord endureth for ever—that we have, each of us, a life beyond the grave, where Justice is done and Love reigns in power and glory.

And that life which lies before us is governed by natural law, or we could not believe in it.

It is not a miraculous novelty, it is not even a "future life" except in a quite limited sense, because it is but the present life of the soul in new surroundings without a body of flesh. There is good reason to suppose that souls have no need of words between each other. Their thoughts are open—they know as they are known, their intercourse is like thinking aloud.

JESUS CHRIST had this power always—He knew the thoughts of Simon the Pharisee, and read the hearts of men like an open book. There are those among ourselves who even in this life begin to have this power of thought-reading. They can, now and then, as in a flash see all that is going on in other minds. A very dear friend of my own had this power at times, and has sometimes answered my unspoken thoughts. This power would be, if it were general, a terrible trial to base men and women. But it is precisely this Palace of Truth that we enter after death. Read George Eliot's story, "The Lifted Veil"[1] if you would realize how dreadful are its results to selfish and mean people. To those who have noble hopes and aims it is a great joy, for it gives the power of seeing a heart's true nature, it is the highest possible assurance of sincerity and love, and enables us to enter into closest fellowship with noble hearts. It is easy to see that such conditions among souls that have great aims knit them into a great brotherhood, powerful for good.

But the same law is the outer darkness and

[1] Printed with "Silas Marner." William Blackwood.

confusion of face for those who, conscious of evil thoughts, hate the light. For them there is no fellowship and no friendship ; for the human condition that real heart-friendship is only possible between the good, is there intensified.

10. What is "heaven"?

So the heaven we look forward to is no place of white robes, crowns, and harps ;—these are but dramatic figures, symbols, now rather outworn, for spotless righteousness, crowns of power, and songs of praise. Taken literally, none of us would wish for such an existence. We look forward to the meeting with those we love, to entering a great family, to new work, new life, new action, strong and free, to comradeship in the Service of the King.

And as I write these last words of this book on Easter Day, 1915, this terrible Easter when the Sun of Righteousness is rising through red clouds of blood and fire and desolation and death, I say—Believe in the Kingdom, work for it, live for it, seek it ; with no fanatic or superstitious zeal, with no illusion that it means an impossible uniformity of thought. Different temperaments will always think differently even about proven facts. It is principles that make harmony, and there is more music in harmony than in unison. Each beautiful and true idea is a celestial melody, to be rendered by many harmonies, each of which is the life of a soul. And the number of possible melodies is infinite. Never imagine that you have, or can have, one only way of right thinking.

The truth of GOD is far too great for any one mind, even for any one nation, to grasp ; but we may each treasure our bit of it in secret till we come to that Kingdom where all desires are known, all thoughts are open, and no secrets are hid.

Meanwhile we must work, ay, and fight too, till all force is on the side of right, and there is universal peace because universal love for the King who died and rose again, the Victor over sin and death.

11. The Kingdom of God—Power allied to Right.

The Kingdom of GOD ! Something outside ourselves to work for ! Something scientifically true, apart from our own special forms of statement ! An ideal but practicable polity ! Something we may help to build firm based on everlasting law, as the coral polyps build their rock fastnesses from the depths of stormy seas ! An ever-present King to love and serve by serving our fellows ! A brotherhood of all noble minds ! What an object in life !

Man has dominion enough and to spare over physical Nature. We knead the glowing iron ; we send the lightning on our errands ; we produce new machines and new explosives almost at will. And, alas ! we wickedly degrade these powers to the destruction of our fellows, we use them for plunder and theft. There is no "struggle" between Man and Nature ; for us the "struggle for existence" is really only a struggle with our own ignorance of the spiritual causes which bring high types of character to

birth. It is the struggle with our indolence, our indiscipline, our perverted wills. If we would but realize the complete truth of the words "Seek ye first the Kingdom of GOD and His Righteousness, and all other things shall be added unto you" we should do every homely duty as well as it is in us to do it. All the necessary work of the world would be well and honestly done, and we should find personal health and social peace and national prosperity follow inevitably, because the causes of good would be in constant operation, overpowering the causes of ill.

This essential Christianity is the one and only remedy for the sickness of the world. Forms of religion do not matter so that the reality be there. Political devices of whatever kind for securing the fruits of character without the originating life are foredoomed failures; and whether they appeal to class-hatreds or class-interests, whether they produce empires or oligarchies or Jacobin revolutions or military dictatorships, they are each but one more illustration of the abiding facts that "the wrath of men worketh not the righteousness of GOD," and that "there is no alchemy whereby leaden character can be transmuted into golden conduct." [1]

This abiding verity, the New Covenant, was sealed to man by the fact of the return of the Risen CHRIST from the gates of death. If we would begin to understand the Resurrection we must concentrate our thought, not on the empty tomb and the tangible body which convinced St.

[1] Herbert Spencer.

Thomas but on the appearance and disappearance which marked the complete control of Mind over Matter, the totally different nature of the soul-body from the physical flesh. It was the unlimited Christ-mind, no longer "straitened" in the body of flesh, to whom was given all power in heaven and on earth. The bodily appearances were but the signs of His Presence: the visibility was not, and is not, needful for His contact with the minds that seek to do His will.

Through all the vicissitudes of History, amid the changing scenes of the falling Roman Empire, the Gothic dominion, the Middle Ages, the rise of the modern nations, and the present age of Science, one everlasting truth abides—that the WAY of development, the TRUTH that satisfies the understanding, and the secret LIFE of the soul are the growth of that "Christ-character" in each of us which does the exactly right thing in each position in which we find ourselves because it is in unity with the Divine Spirit. This is one meaning at least of His saying, "I am the Way, the Truth, and the Life." This alone can give peace on earth, because this alone gives to diverse temperaments full liberty in the common practice of Justice and kindliness which makes men of Goodwill.

This is what is meant by "Christ being in us." The relation which we each hold to GOD'S Creative Spirit is very like that which the cells of our body hold to its soul. That soul is not stuck into the body like a knife into its sheath, but inhabits *and creates* each cell. That soul can exist, and does exist, independently of the cells, yet these

cells express its activities in a material world. If they fail in their functions, grief and pain result. If they are in health, the soul rejoices.

So it is with us and the Divine Spirit. He gives us life. His will, if done by us, is the order and beauty of the world. Our health is our Father's joy, and our disgraces "crucify the Son of GOD afresh and put Him to an open shame."

12. The answer to the mystery of life.

This is the Mystery of the Kingdom of GOD, as far as I can explain it to you. There will be a good deal that you cannot understand yet, or can only understand after some thought and care. But if you really *wish* to understand you will be guided into fuller and fuller comprehension. You must not expect immediate solutions to the questions that will arise in your minds. We do not know exactly *how* CHRIST'S coming will be. As with all prophecies, we do not see the historical fulfilment till it has actually occurred, but we may be sure that it will be fulfilled in *some* way, and that each one of us is helping it forward by right-doing in our particular place in life, or hindering by wrong-doing and carelessness. We may be dead-sure that it will come, for its course is set by true spiritual law; and if we wilfully persist in wrong-doing we shall be putting ourselves outside it, in opposition to the resistless Power which has abased nation after nation as each became corrupt. We shall be deliberately choosing the outer darkness and the inward fire which are "hell" to the undying soul.

This is the mere outline : there is much more that you will see as your powers grow. Understanding the prophecies of the Kingdom is like approaching a great mountain range. From afar we see the snowy peaks. They look like one hill. When we get nearer we see range behind range, and when we climb the first slopes our ascent brings us to one yet higher. So in prophecy, what looked like one event is found to be two or three, separated by valleys of Time. Not till we reach the last do we see the full glory of the snows, the blue ice-caves, the grassy uplands carpeted with sweet white narcissus and the starry blue of the gentians and all the lovely Alpine flowers. At last we see the way we have come in perspective and proportion.

So it is with the Kingdom. You will find the directions of the Guide Book correct. You will learn much as you go forward. I have told you mere principles—these do not alter. They will suit with any form of religion to which your parents may belong and in which you have been brought up. Your growth should be in Joy, just as a journey in the mountains is a delight. Keep brave, keep your heart true and your mind clean—that will suffice. For if you are true and brave you can scarcely be idle, and if you are clean in mind you will like no base things. Hold fast to the principle of GOD'S guidance just as if you were the only soul in the world ; put your hand in His as you go through life. You need not be specially " religious " ; you need not, indeed you will not, show any outward difference except to be more

courteous, more thoughtful for others, less disposed to hard judgments. You will not talk about religion, above all you will never argue about it, but you will wait for the light that never fails to come.

You will play and enjoy life with more zest than ever. Nothing is forbidden you, for the truth will have made you free. You can choose any path in life that you will, but you will know that wherever you find yourself, *there* and nowhere else is your appointed place in the Kingdom, for the time at any rate. By your fulfilment of your duty in that place you will be judged. You have access to the Unseen Friend, your living Lord and King, who will guide and guard you if you seek to do your duty ; for all who give their lives into His guidance receive help for all the duties of life—duties of the home, the school, the farm, the mart, the study, and the workshop, aye, and of the camp and the battle-field ; for the armies of the Living GOD have no mere function of passive endurance : " In Righteousness He doth judge and make WAR." All can have the wisdom which guides from within and does not compel from without. " If any man lack wisdom, let him ask of GOD, Who giveth to all men freely and upbraideth not." This " water of life " is free to all without money and without price.

But remember above all things this : that *you cannot use that protection and guidance for your personal profit, nor to save you trouble, nor in any way to exalt you above others, but to gain wisdom to see your duty and strength to do it.*

In this it never fails, but the Spirit will not become a servant to the body. And you will have the secret consciousness that you have the high privilege of acting under Him Who says, "Behold, I make all things new. I am Alpha and Omega, the beginning and the end. He that overcometh shall inherit all things, and I will be his GOD and he shall be My Son."

No man can add to or take away from that Promise, and boys and girls can understand it as well as the oldest of us. And that boys and girls are capable of the highest unselfishness is shown in the noble words written by a young officer, scarcely out of boyhood, just before he gave his life for the Great Cause :—

Units, individuals, cannot count in this war ; for remember, we are writing a new page of history. Future generations cannot be allowed to read the decline of the British Empire and attribute it to us ! We live our little lives and die. To some is given the chance of proving themselves men, and to others no chance comes. Whatever our individual faults, virtues, or qualities may be, it matters not ; but when we are up against big things, let us forget individuals, and let us act as one great British unit—united and fearless ! Some will live and many will die, but count the loss naught. It is better far to go out with honour than to survive with shame !

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